

Figure 1A

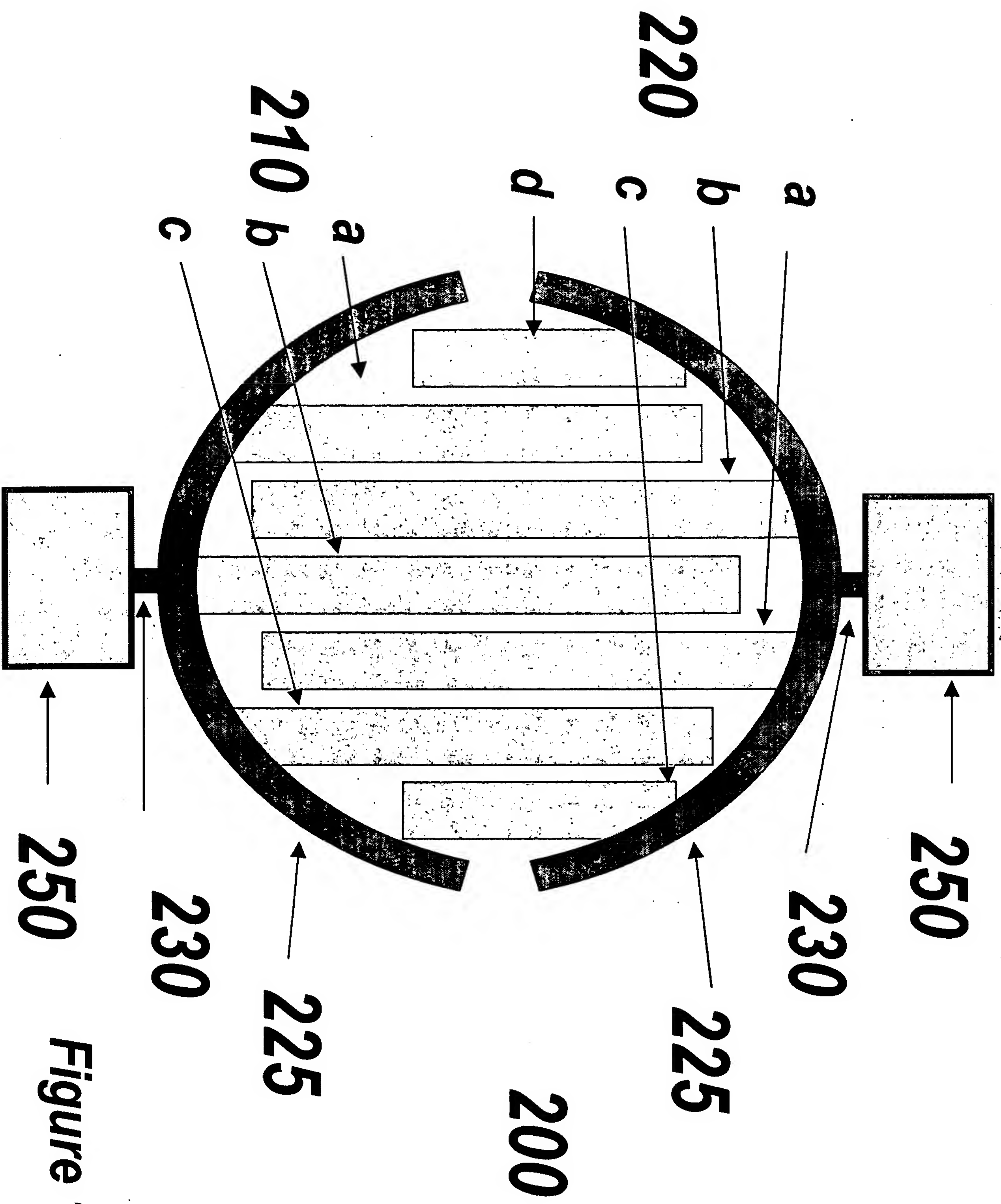


Figure 1B

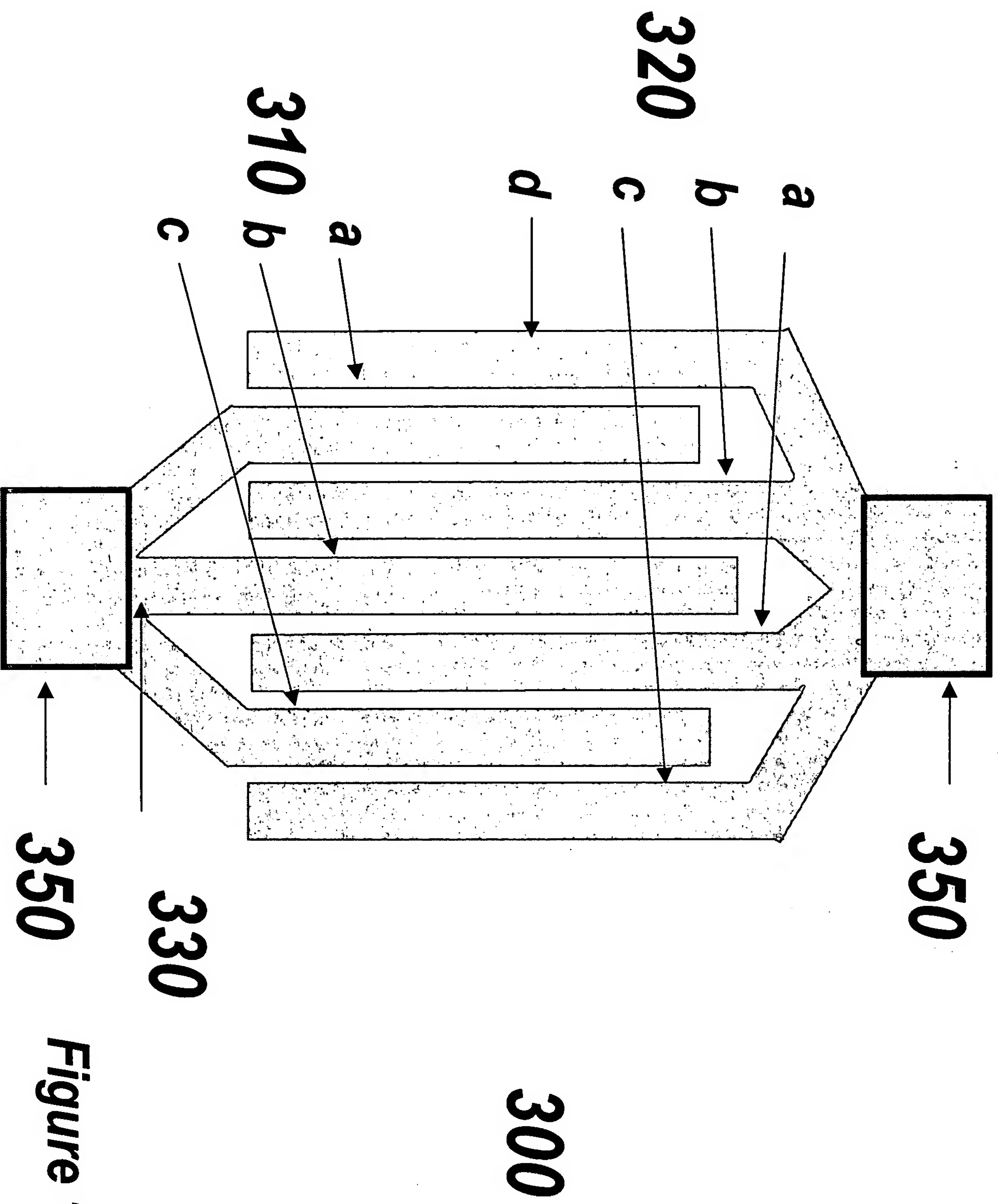


Figure 1C

Figure 2

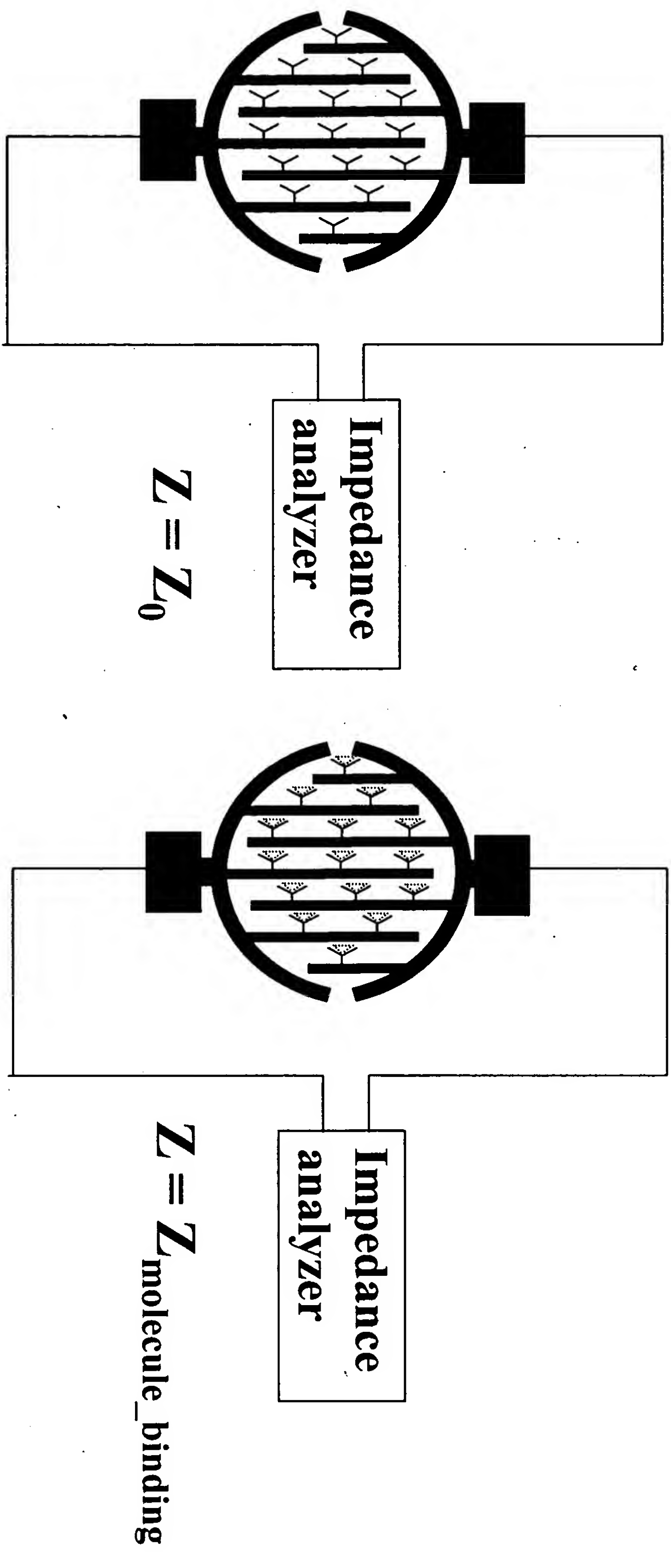
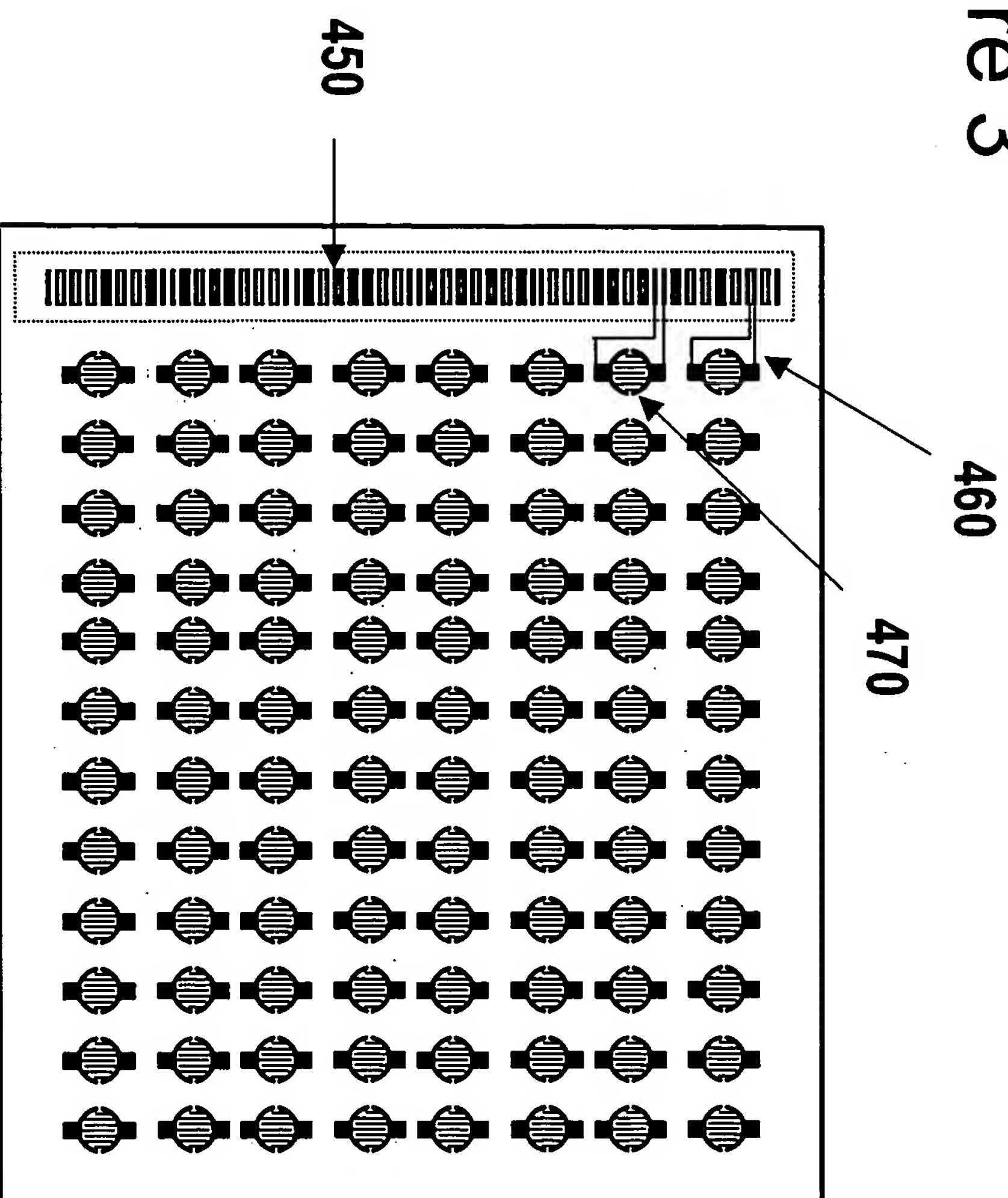
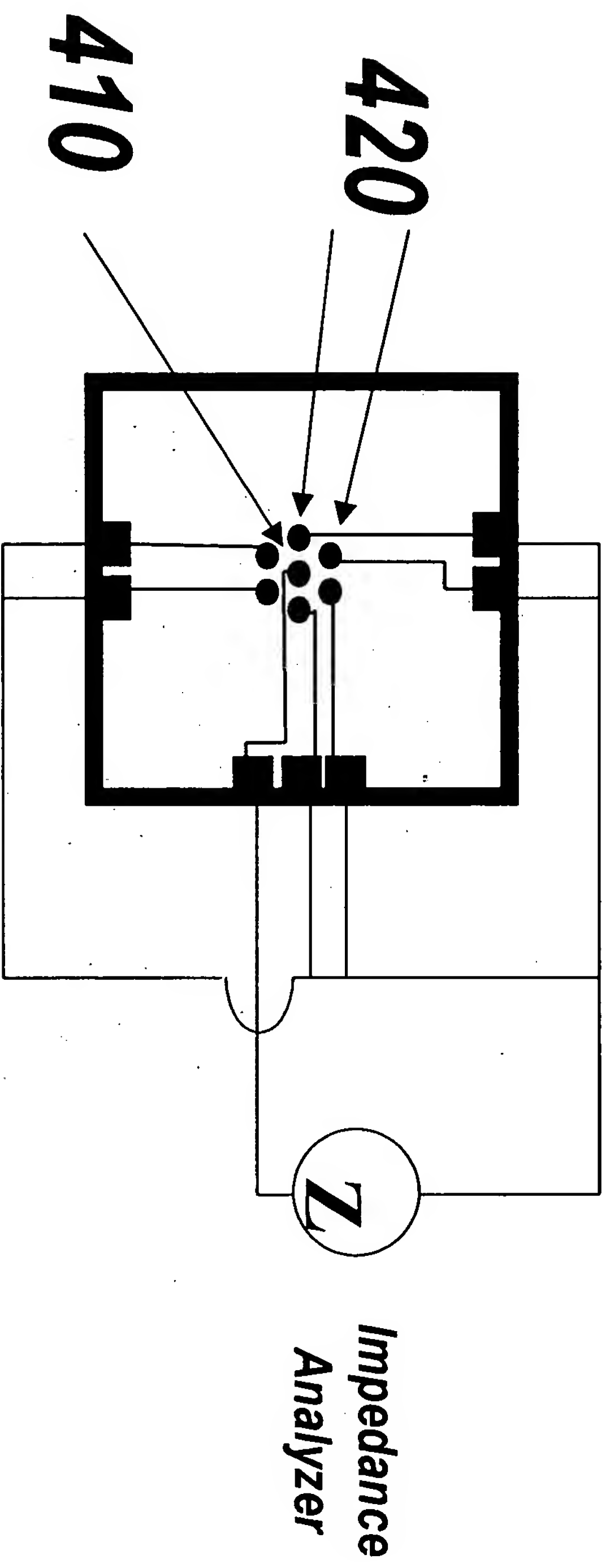


Figure 3



Microelectrode plate (96-well plate)

Figure 4A



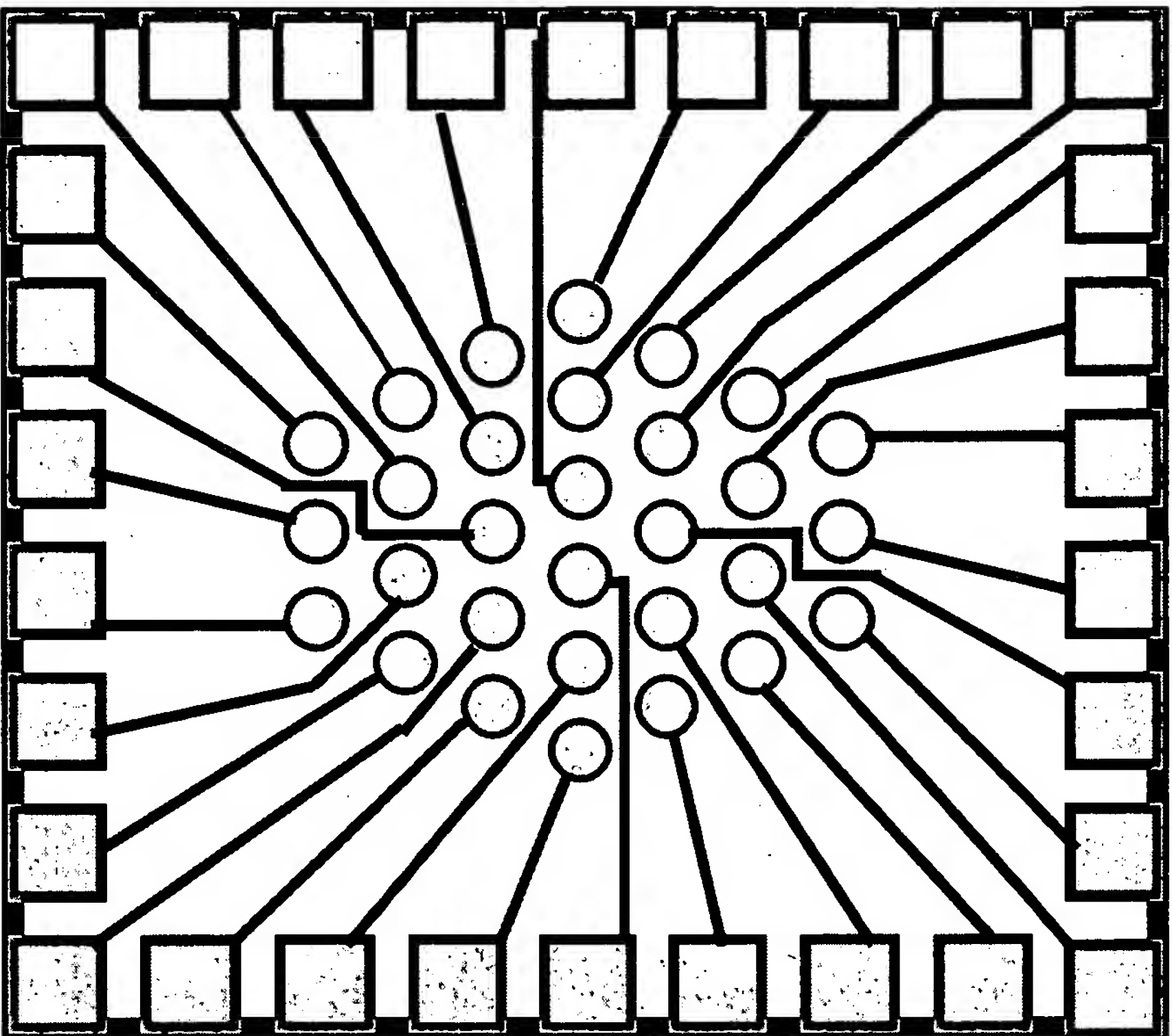


Figure 4B

Figure 5

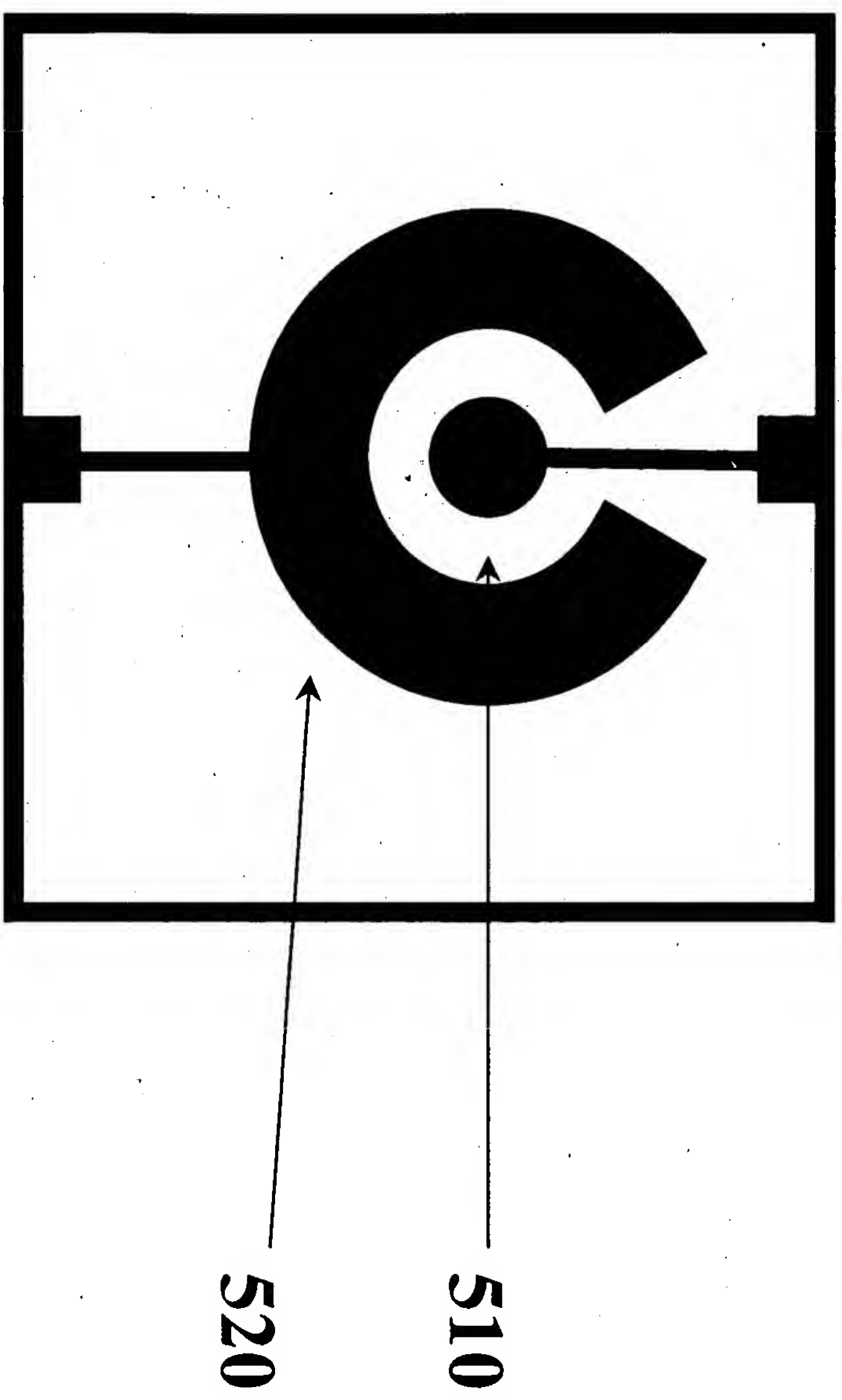


Figure 6

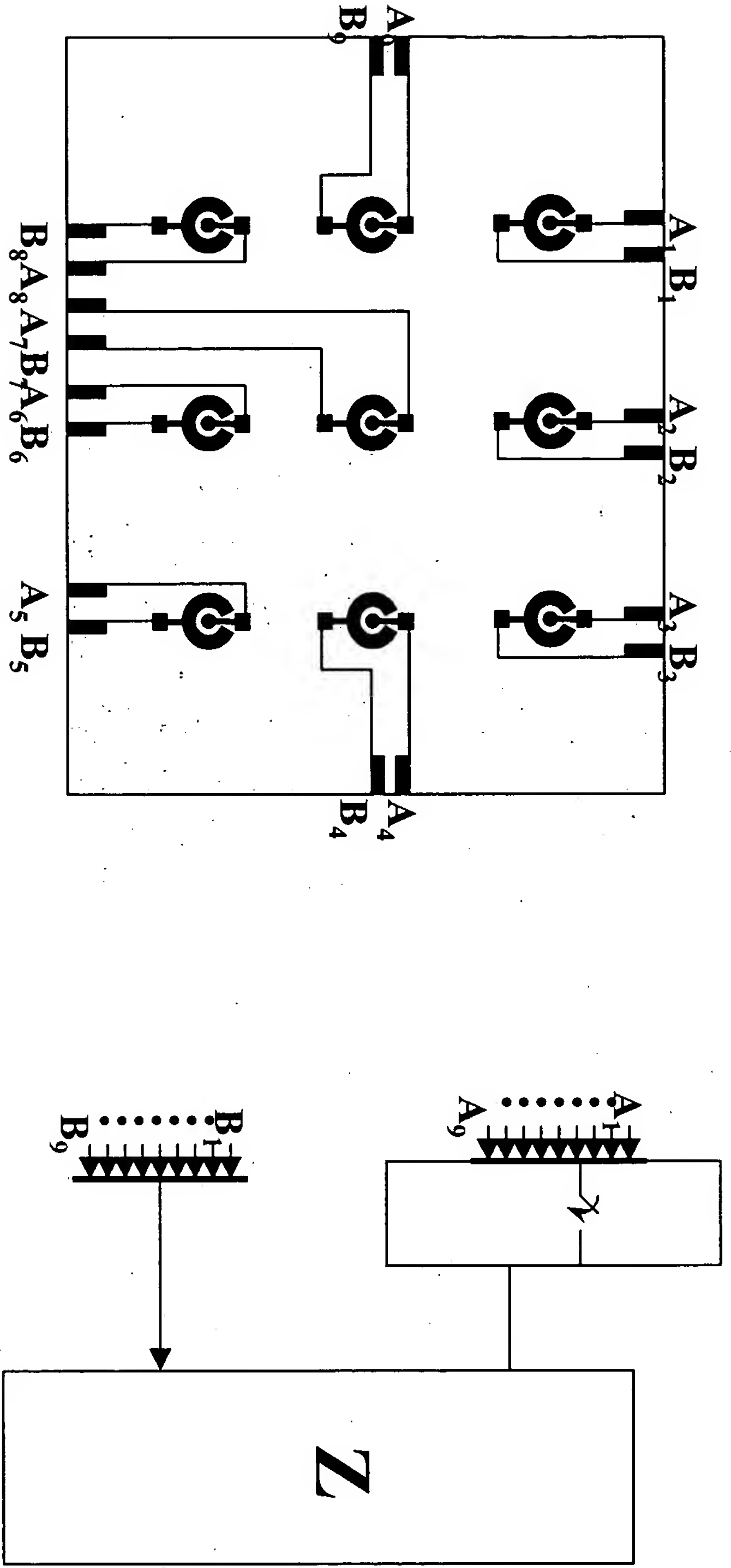


Figure 7A

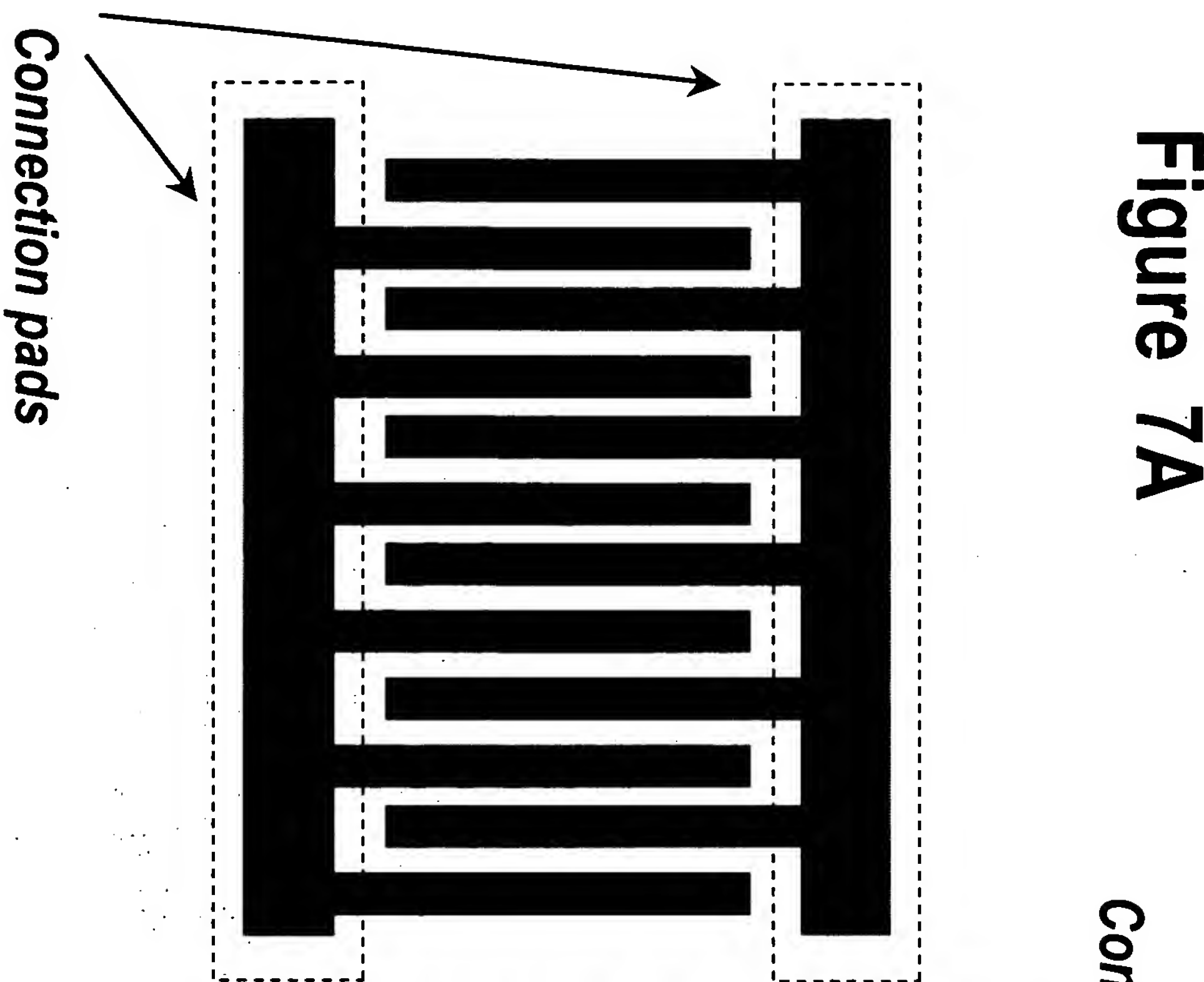


Figure 7B

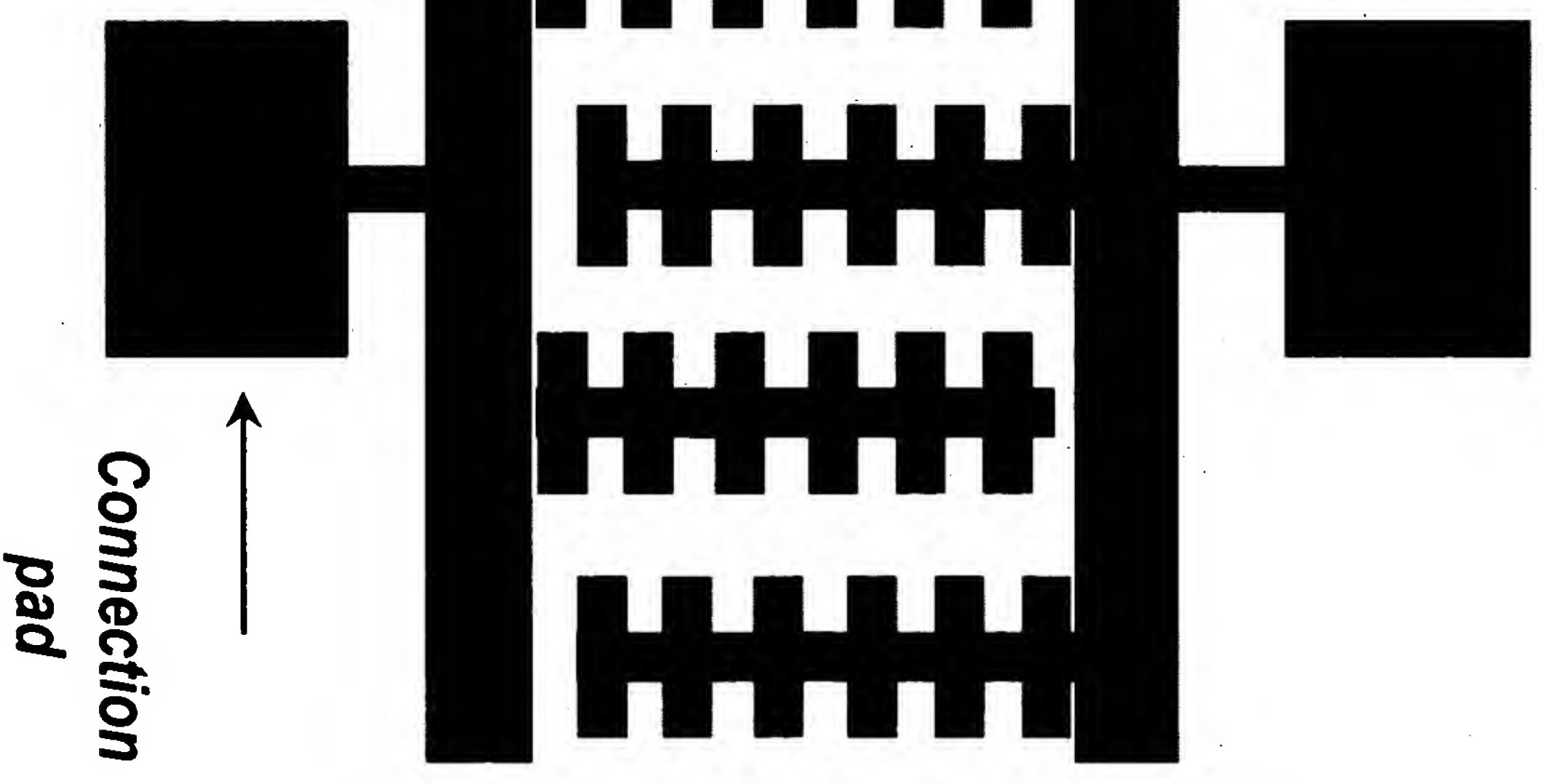


Figure 7C

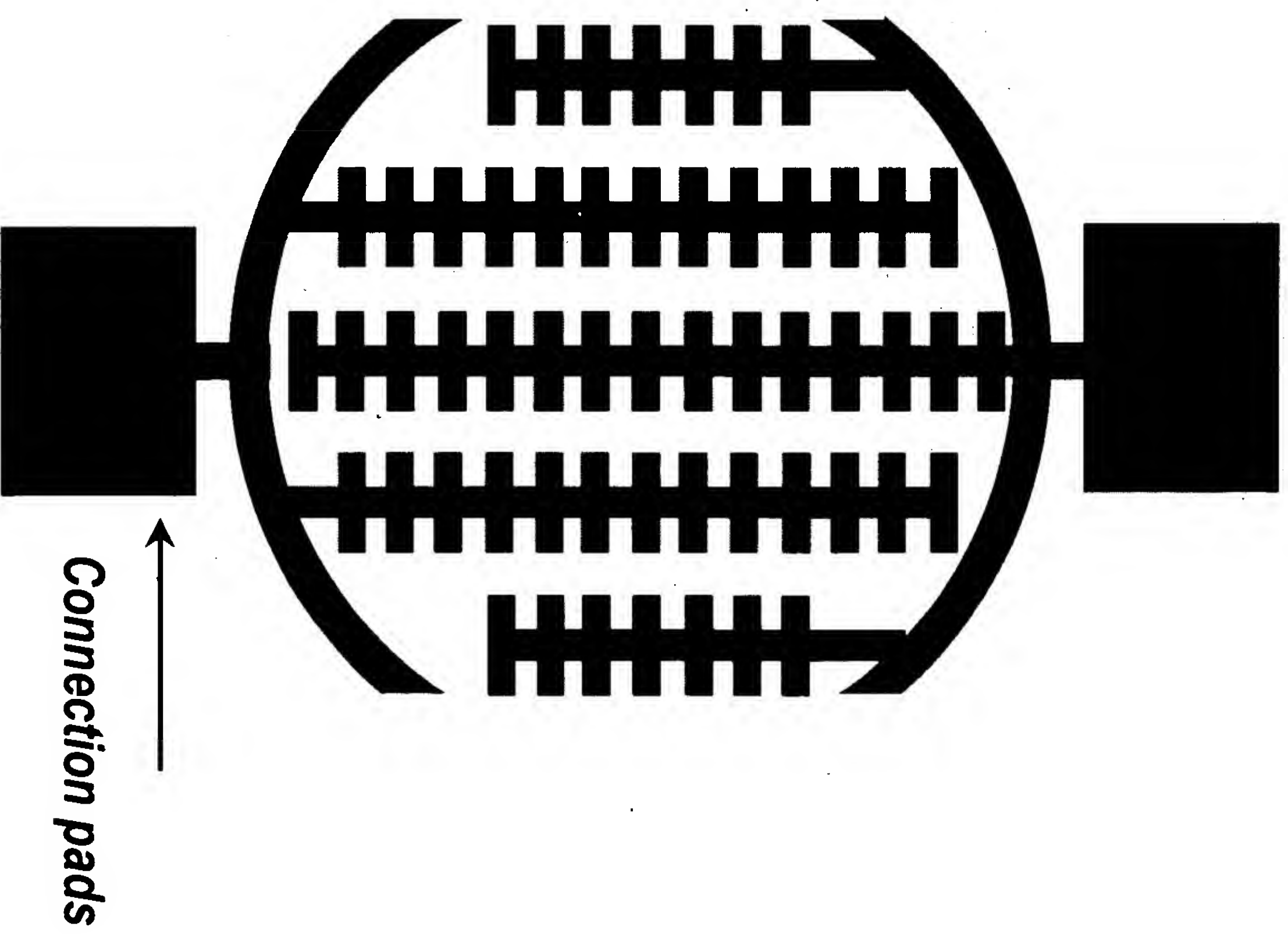
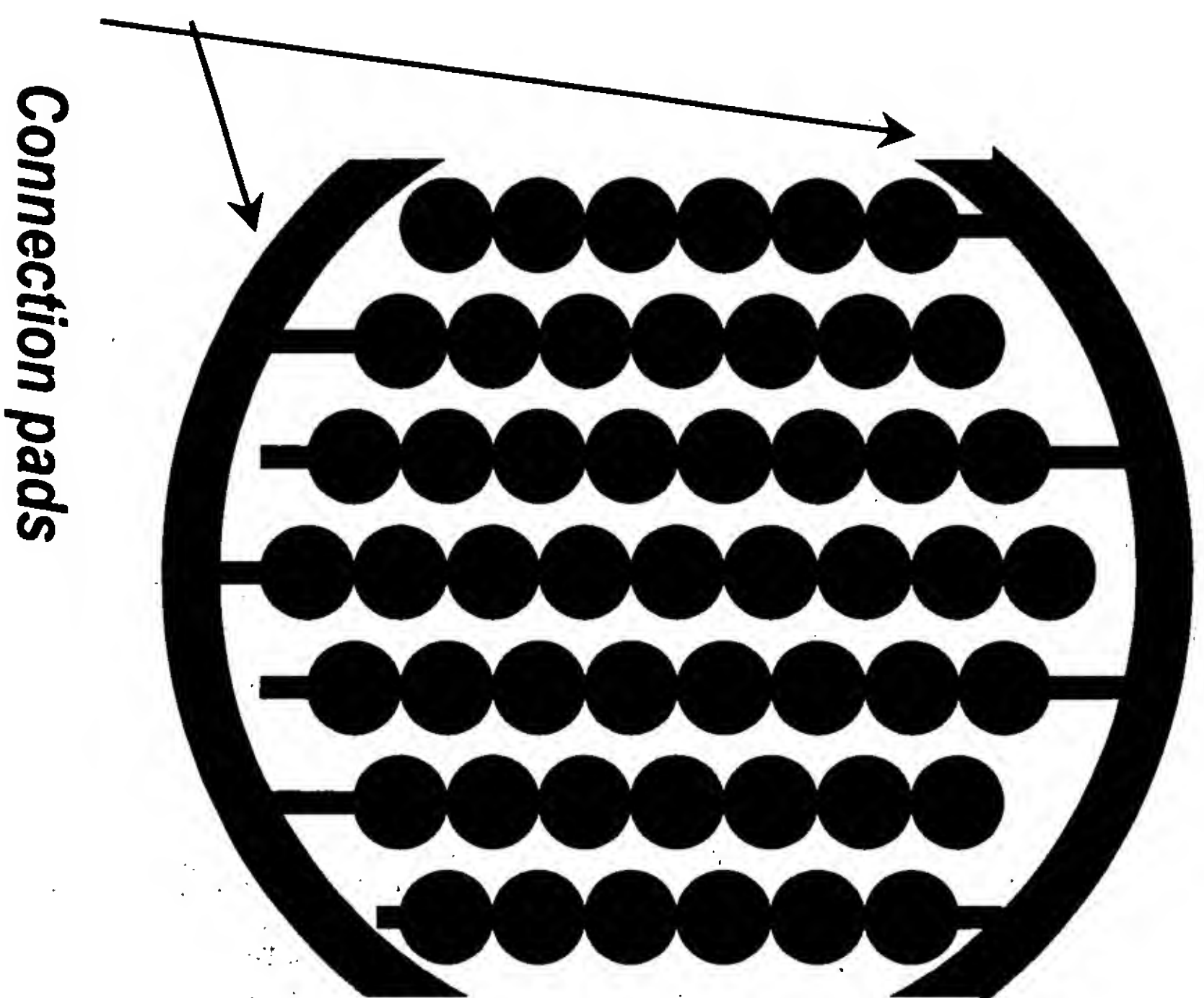


Figure 7D

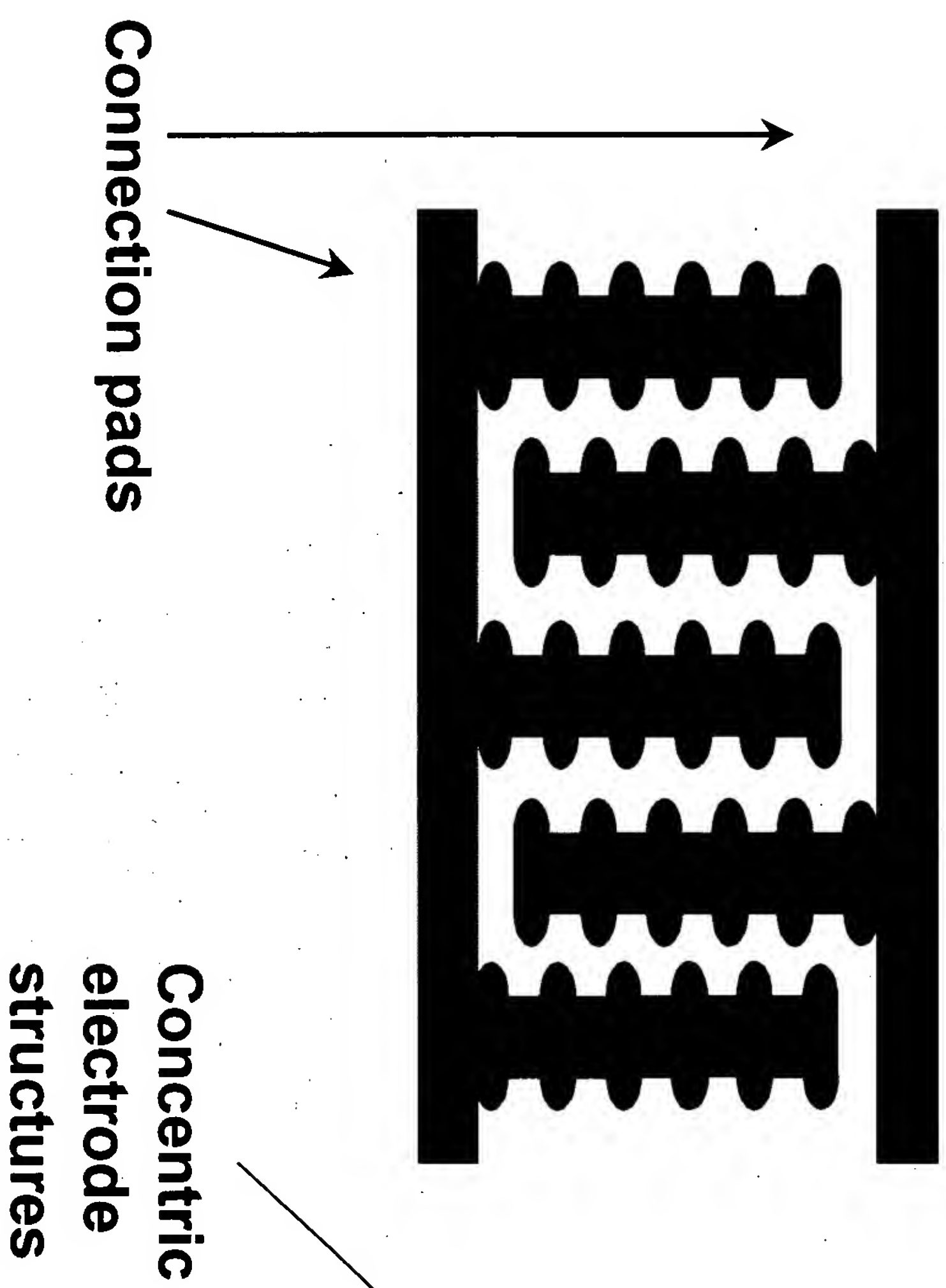


Figure 7E

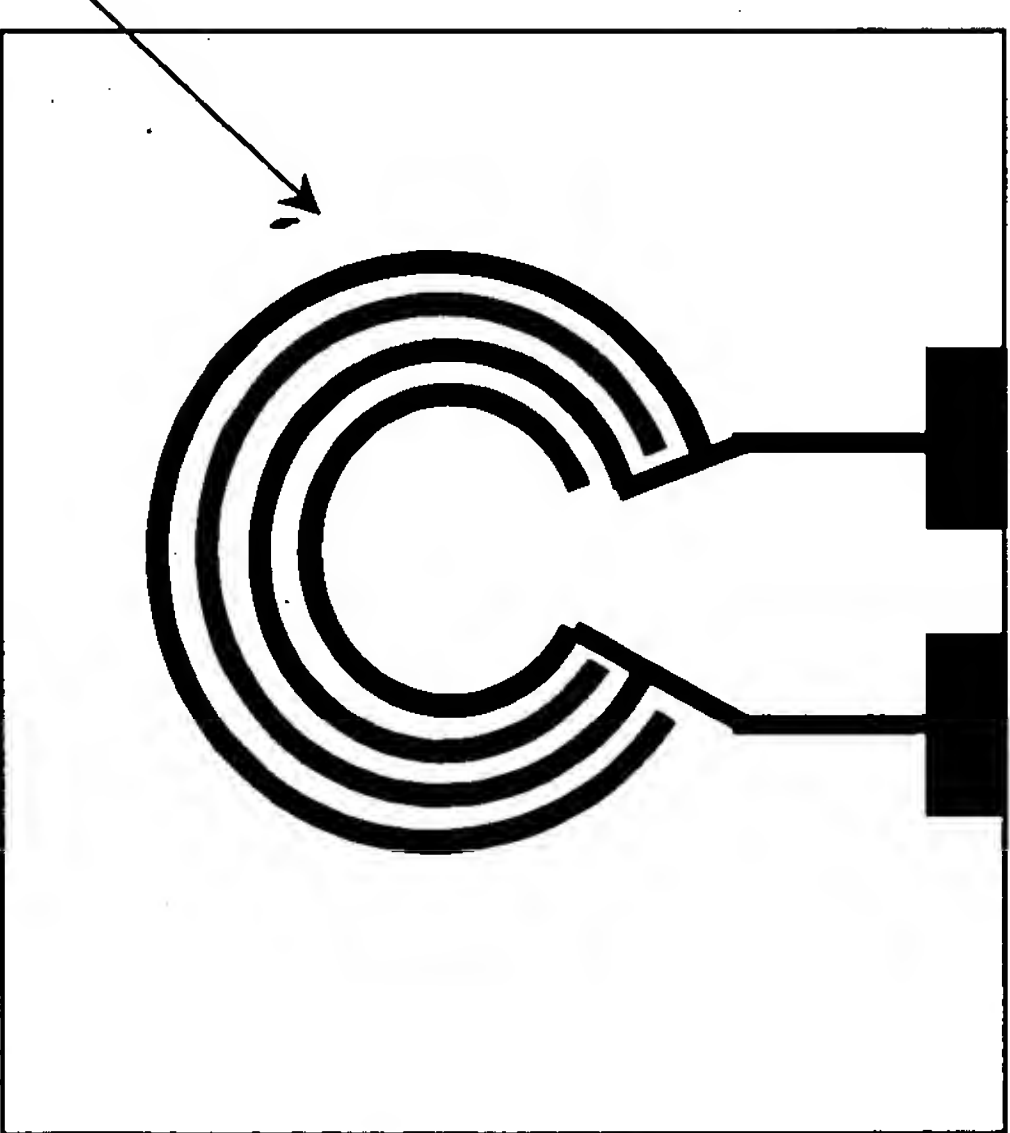
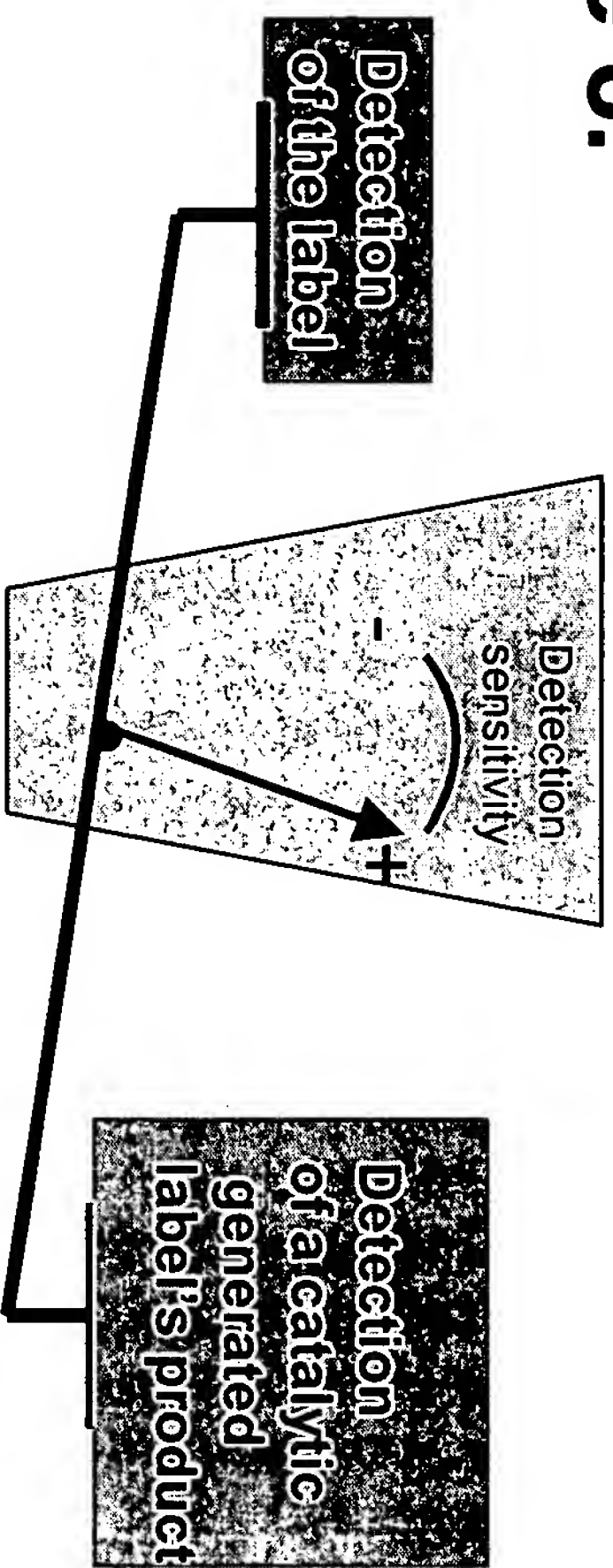


Figure 7F

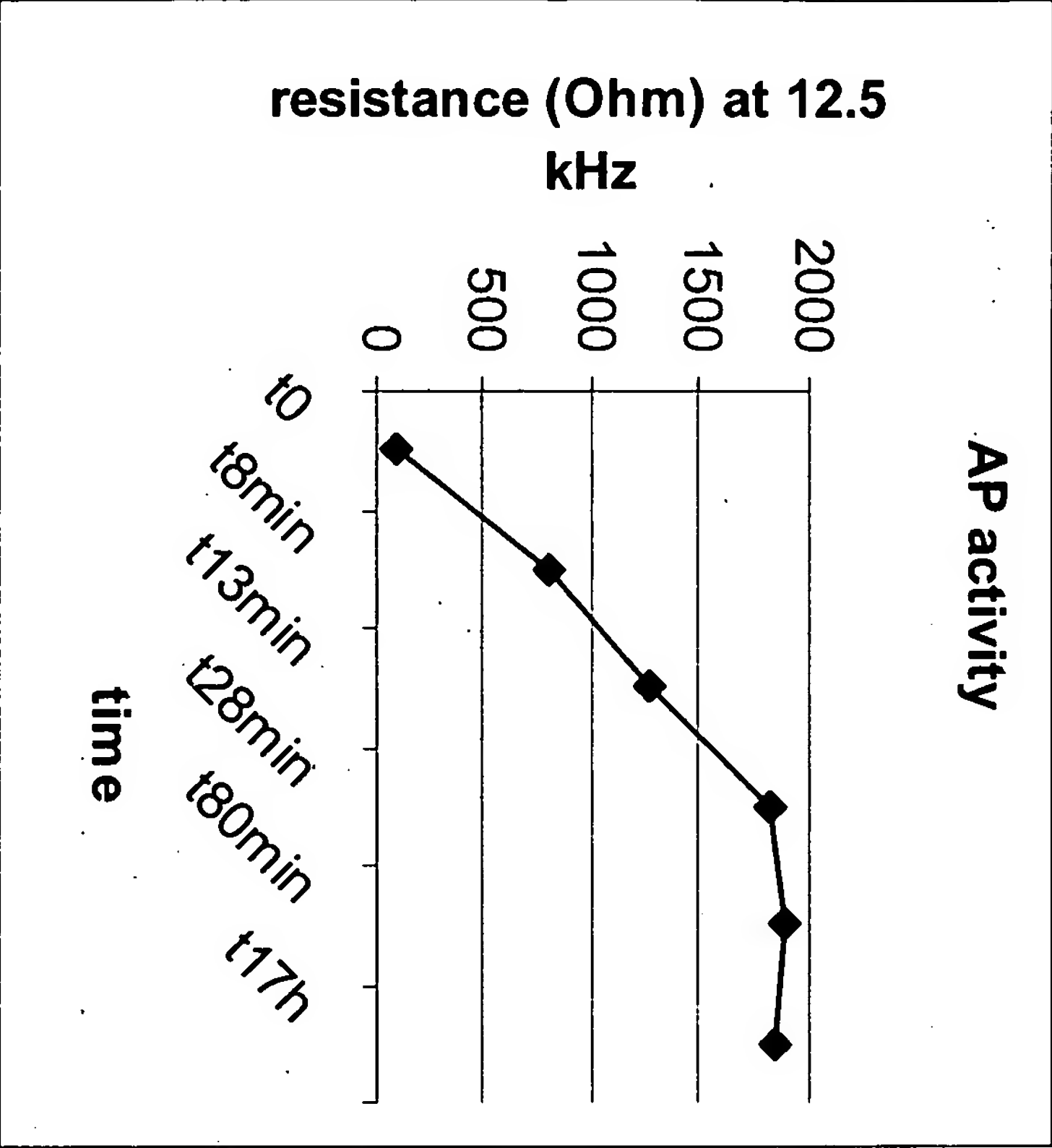
Figure 8.



Signal amplification for improved detection sensitivity by indirect measuring catalytic products of enzyme-mediated reactions. Examples of enzymes commonly used include alkaline phosphatase (AP) and horseradish peroxidase (HRP). Here are some typical reactions used.

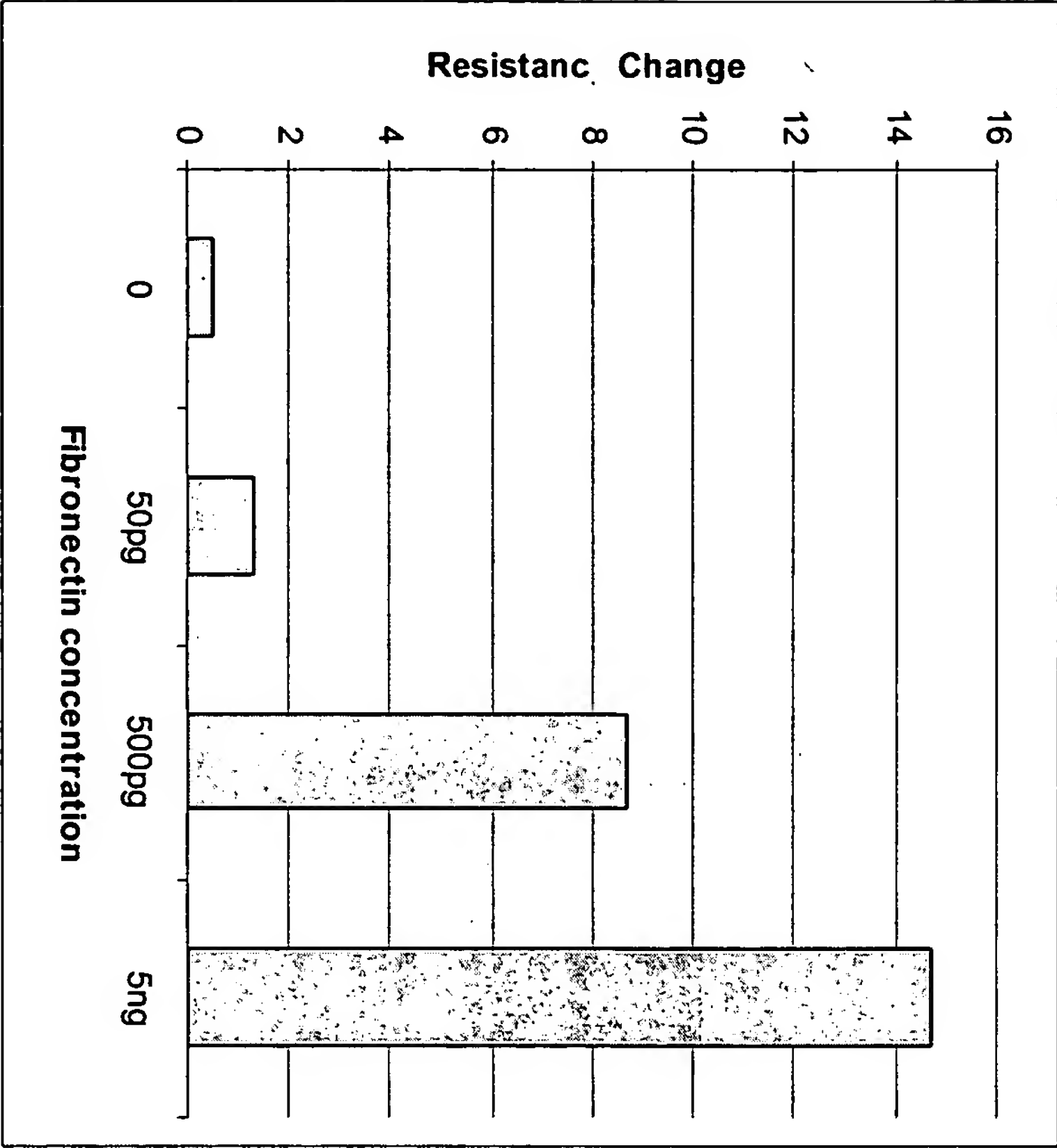
Enzyme	Reagents	Reaction
HRP	4-chloro-1-naphthol (4CN)	Oxidized products form purple precipitate
HRP	3,3'-diaminobenzidine (DAB, with or without NiCl_2)	Forms dark brown precipitate
HRP	3,3',5,5'-tetramethylbenzidine (TMB)	Forms dark purple stain
AP	5-bromo-4-chloro-3-indolyl phosphate (BCIP) /nitroblue tetrazolium (NBT)	BCIP hydrolysis products indigo precipitate after oxidation with NBT; reduced NBT precipitates, dark blue-gray stain results

Figure 9.



Resistance (ohm)	
t0	82
t8min	801
t13min	1263
t28min	1825
t80min	1881
t17h	1841

Figure 10.



Fibronectin

Resistance

Fold Change

0 0.49

50pg

1.28

500pg

8.66

5ng

14.67

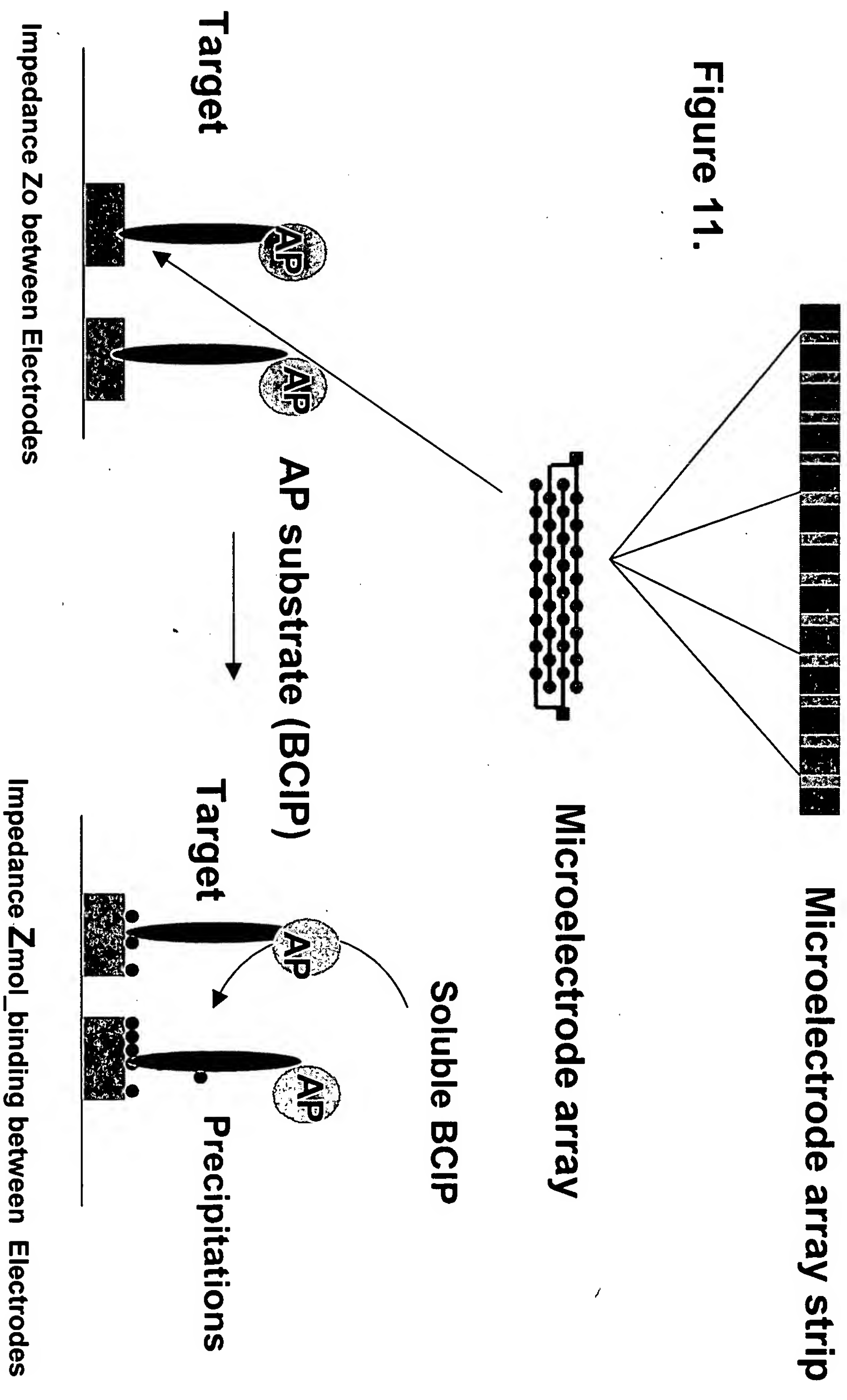


Figure 12 A

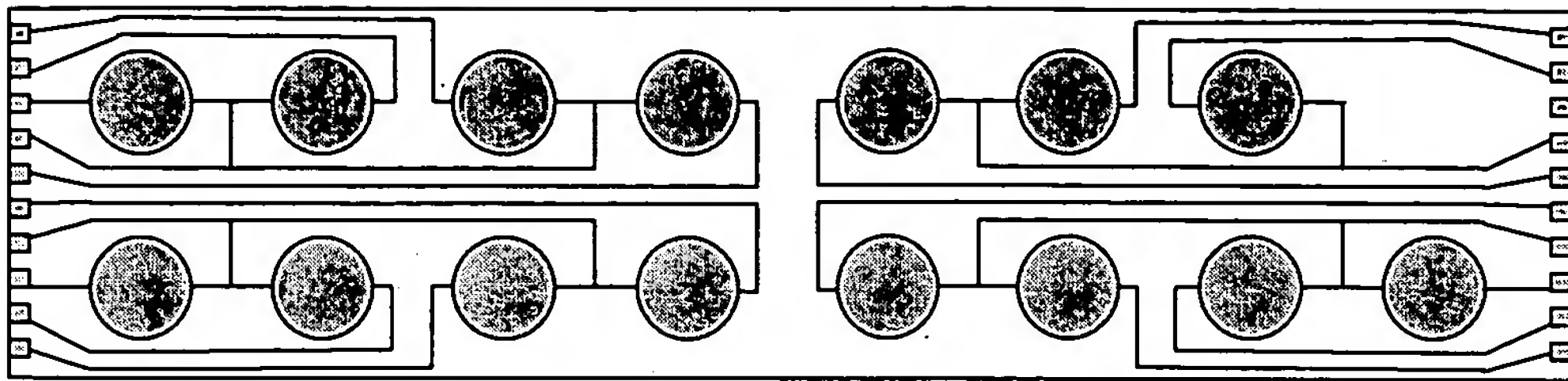


Figure 12 B

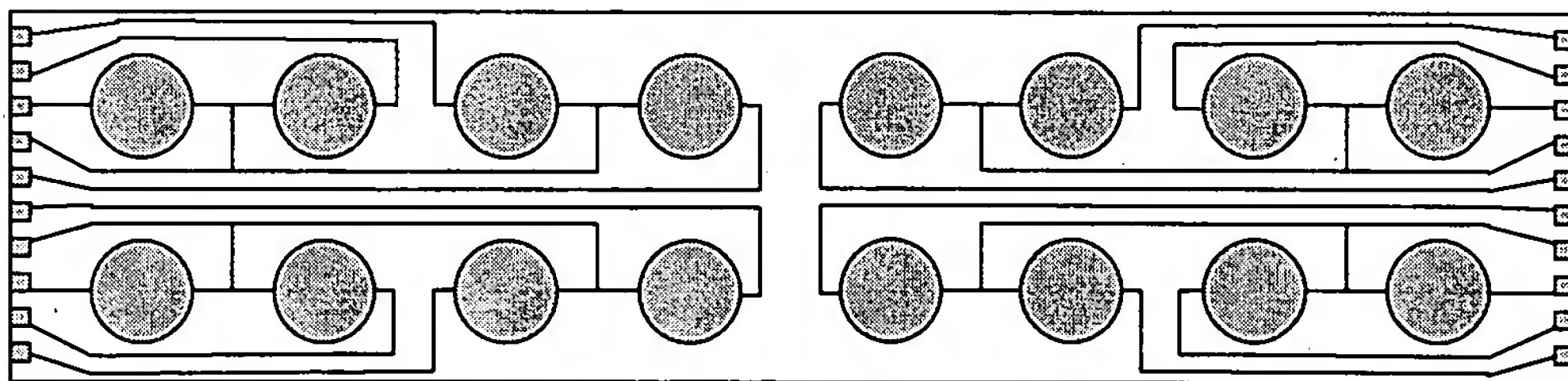


Figure 12 C

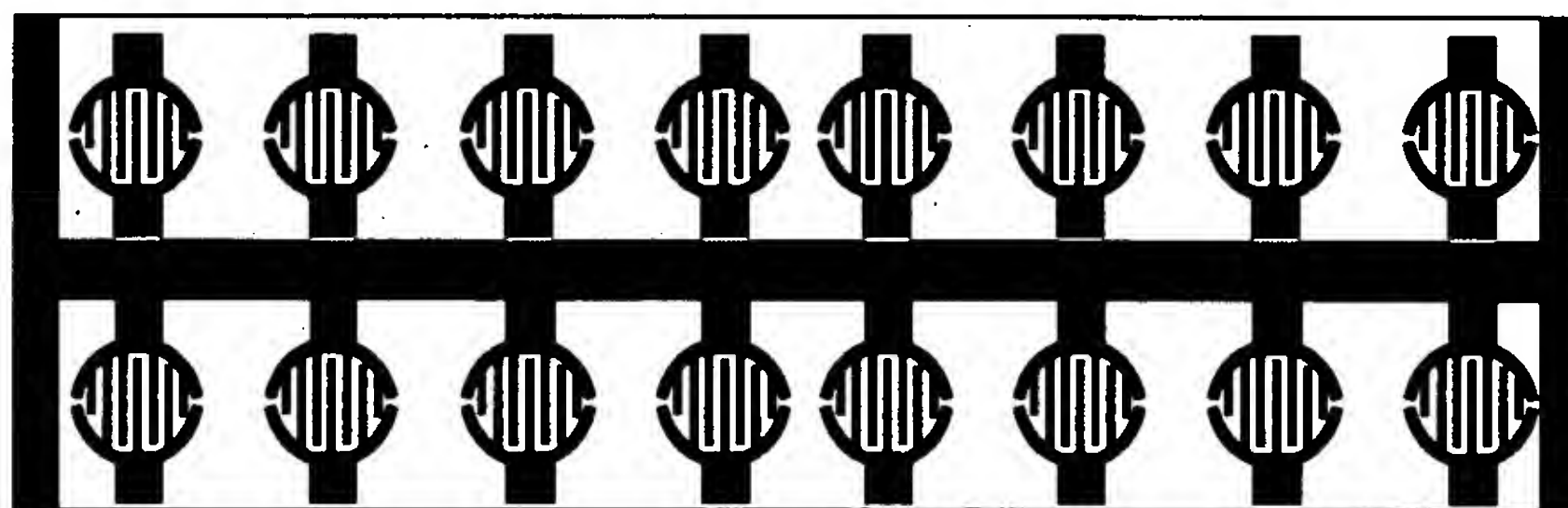
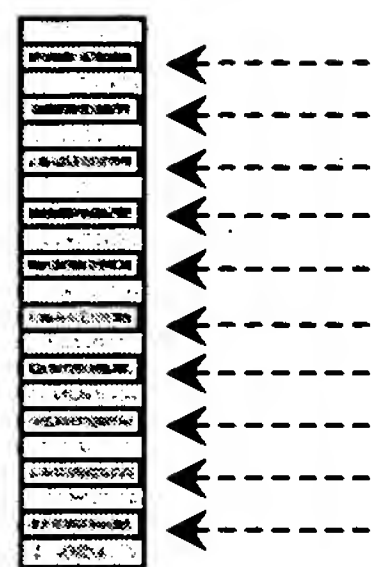


Figure 13 A



Electronic conductor lines

Figure 13 B

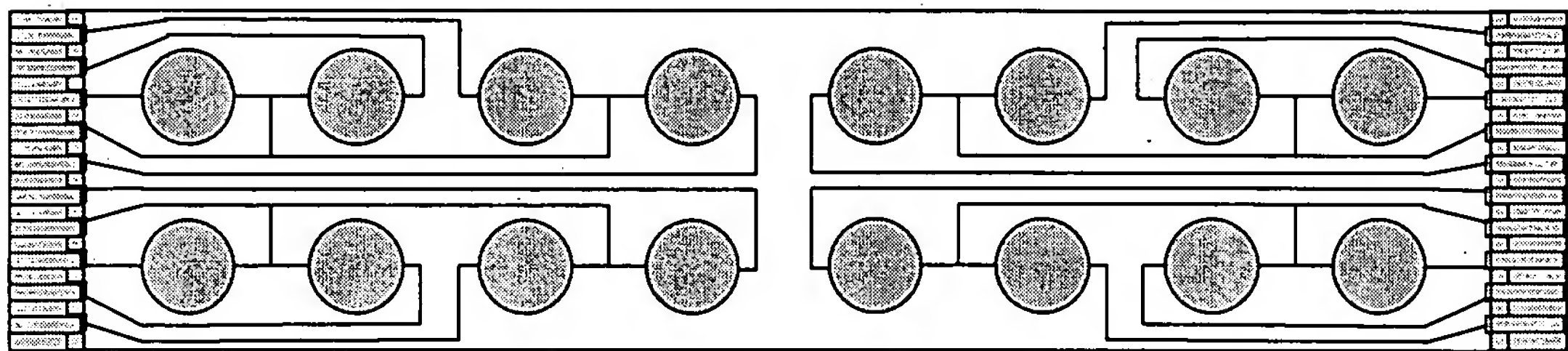
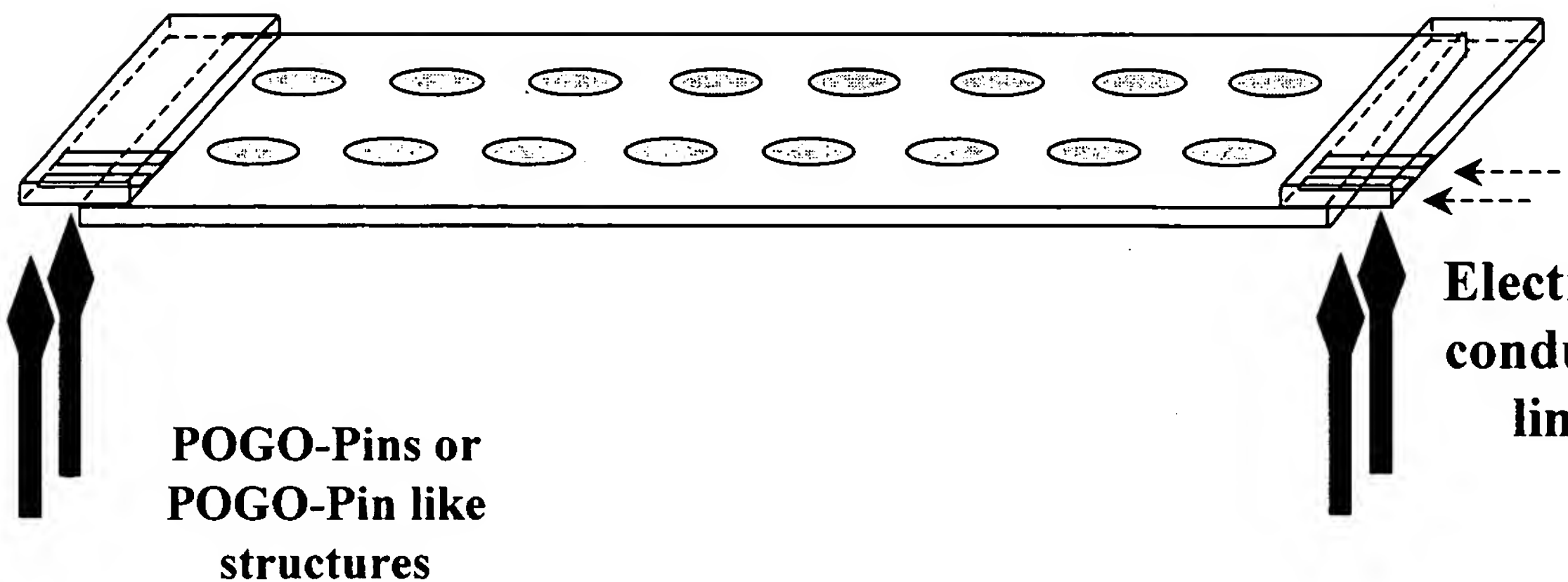


Figure 13 C



Electronic conductor lines

POGO-Pins or POGO-Pin like structures

Figure 14 A

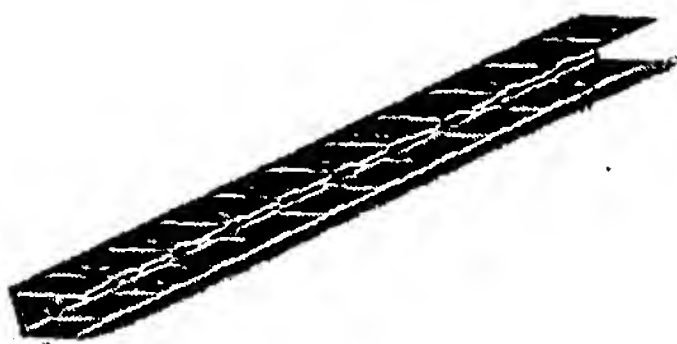


Figure 14 B

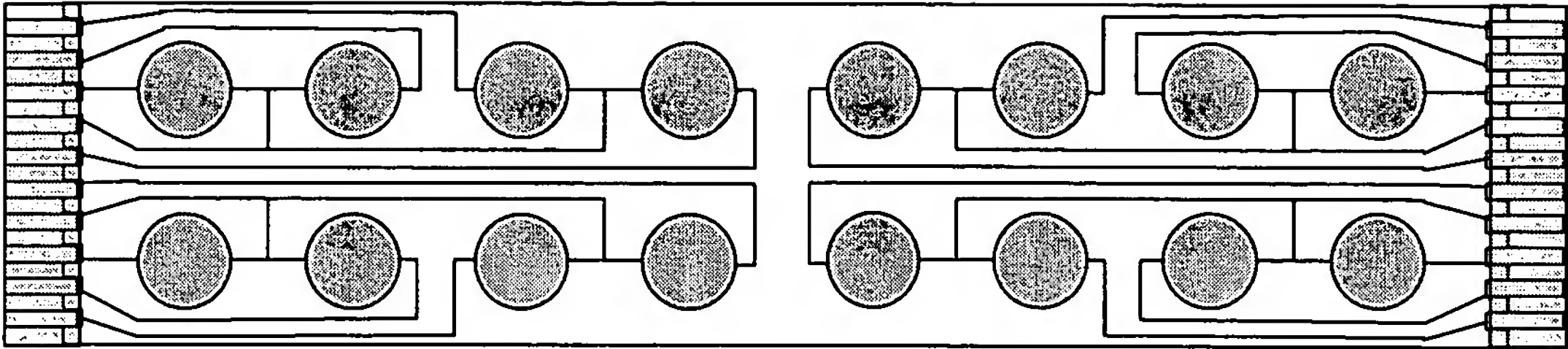


Figure 14 C

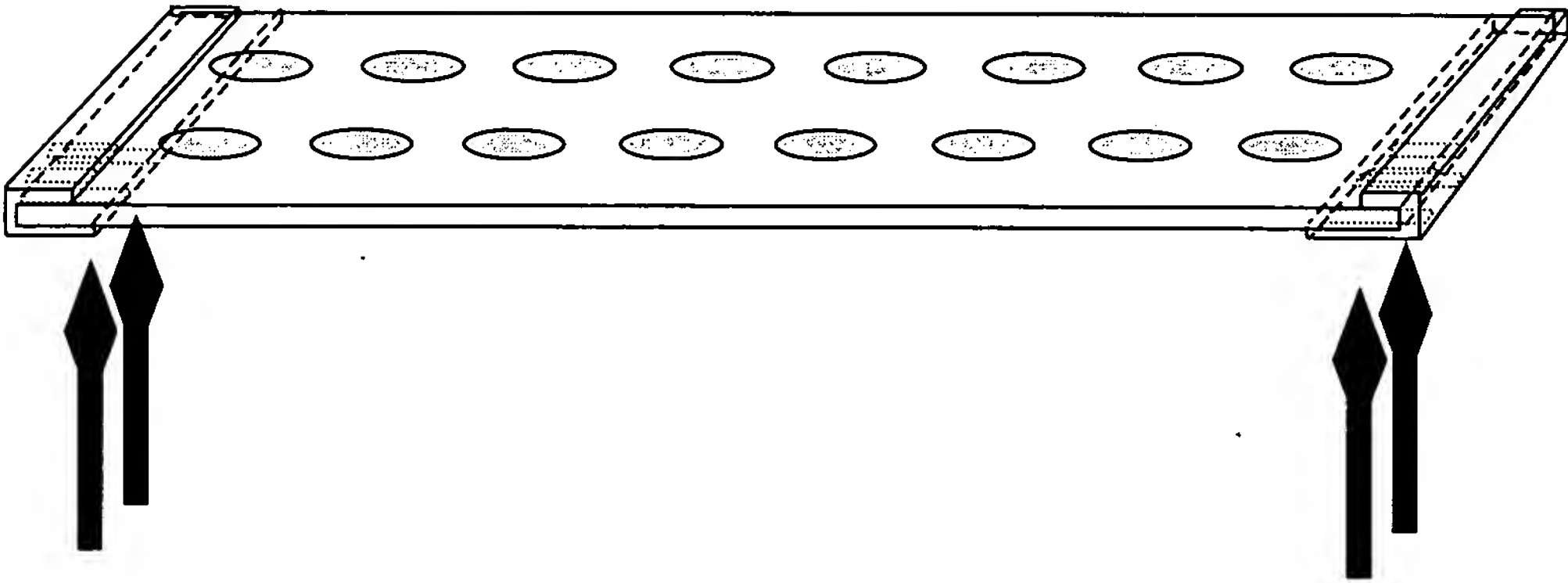


Figure 14 D

Metal clip type A



Figure 14 E

Connection pads on substrate

Electrode structures

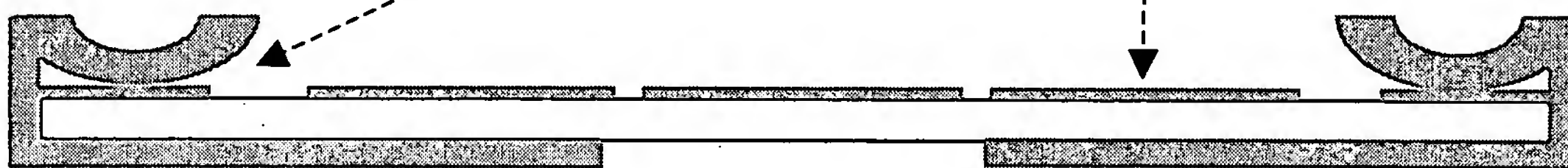


Figure 14 F

Metal clip type B

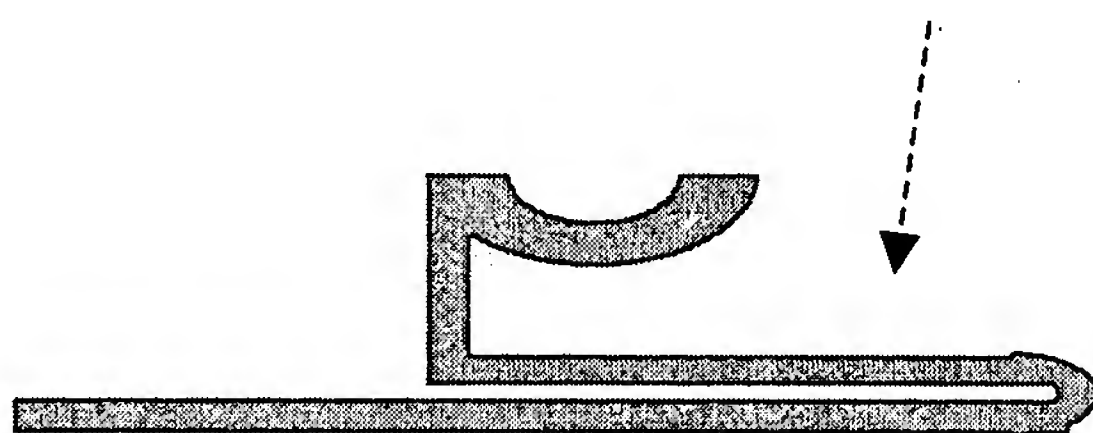


Figure 14 G

Connection pads on substrate

Electrode structures

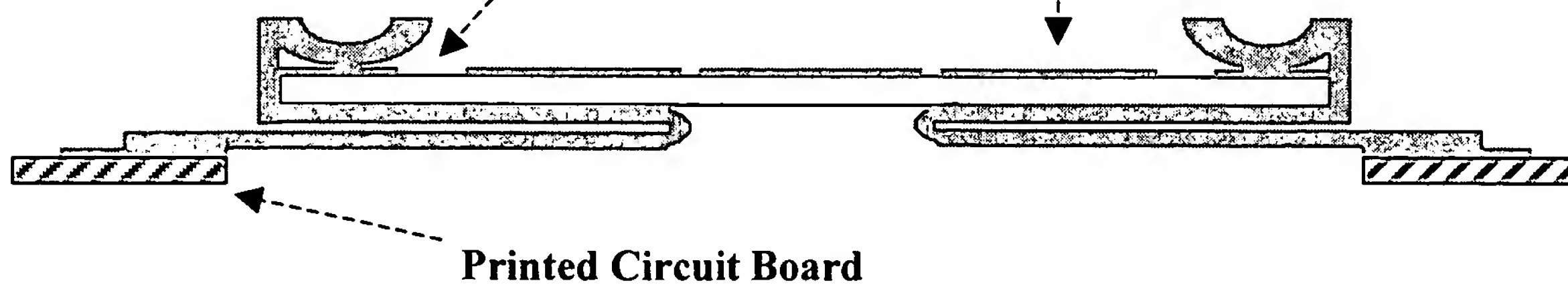


Figure 15(A)

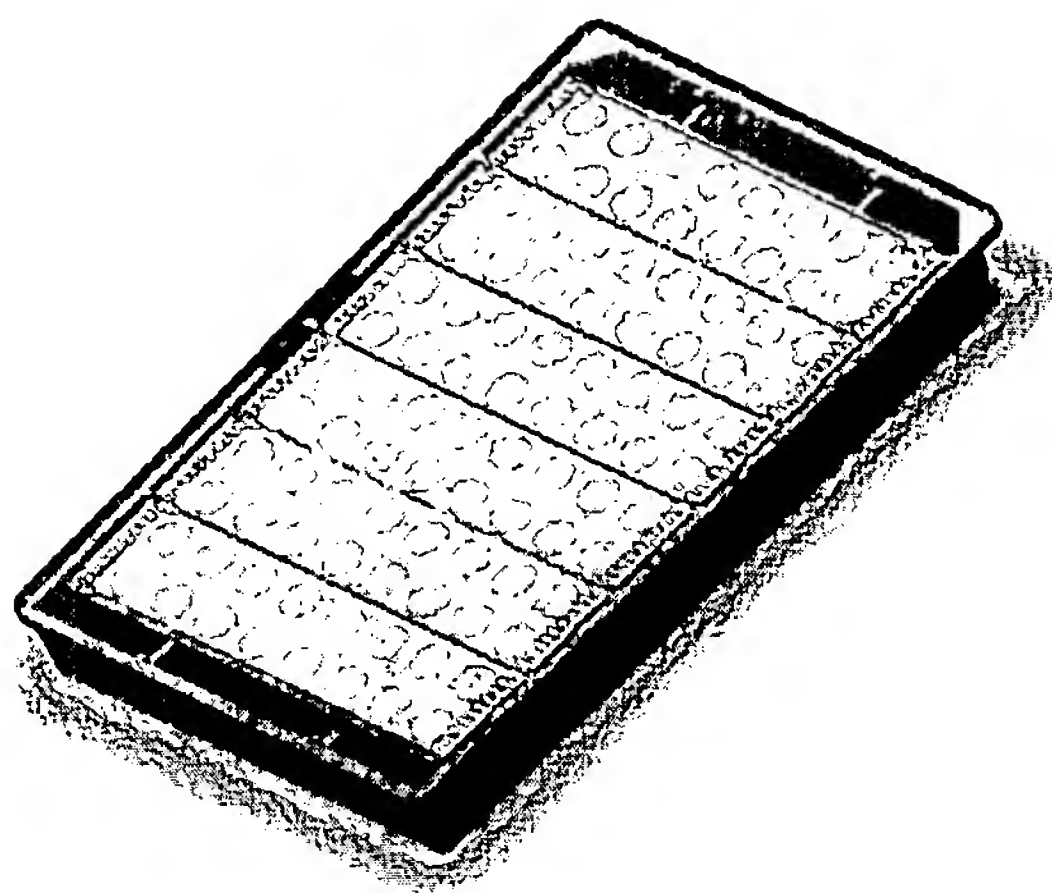


Figure 15(B)

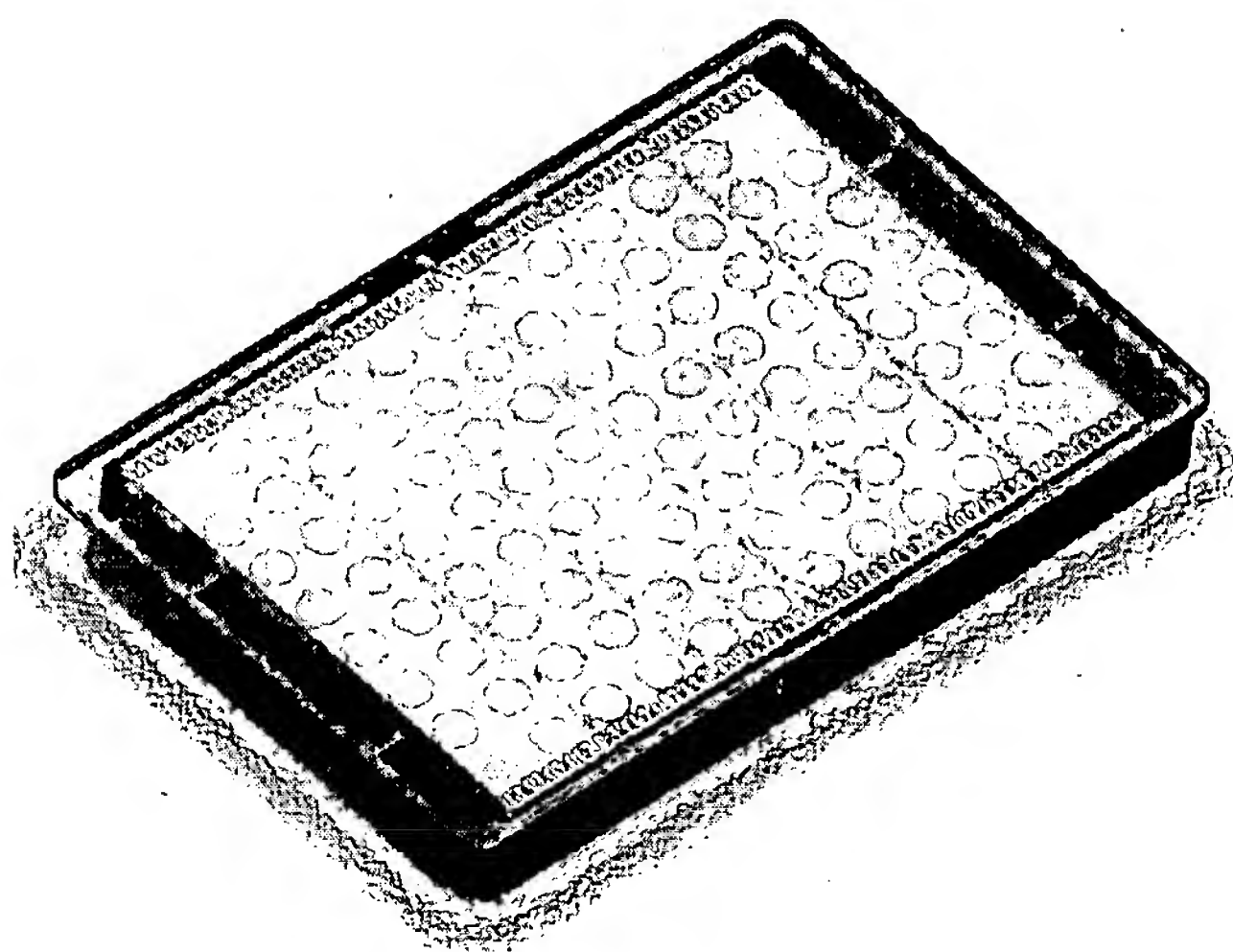
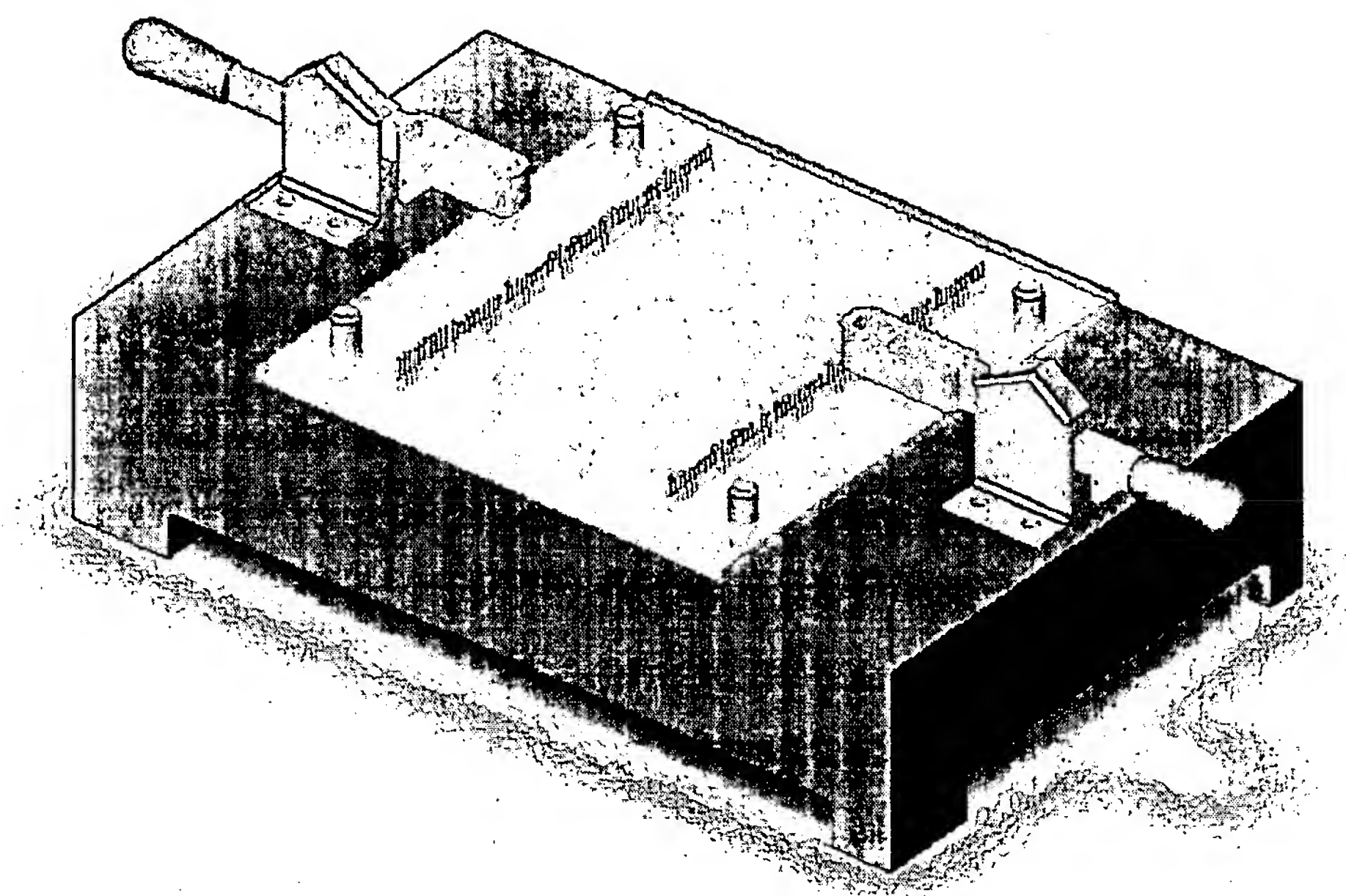


Figure 16.



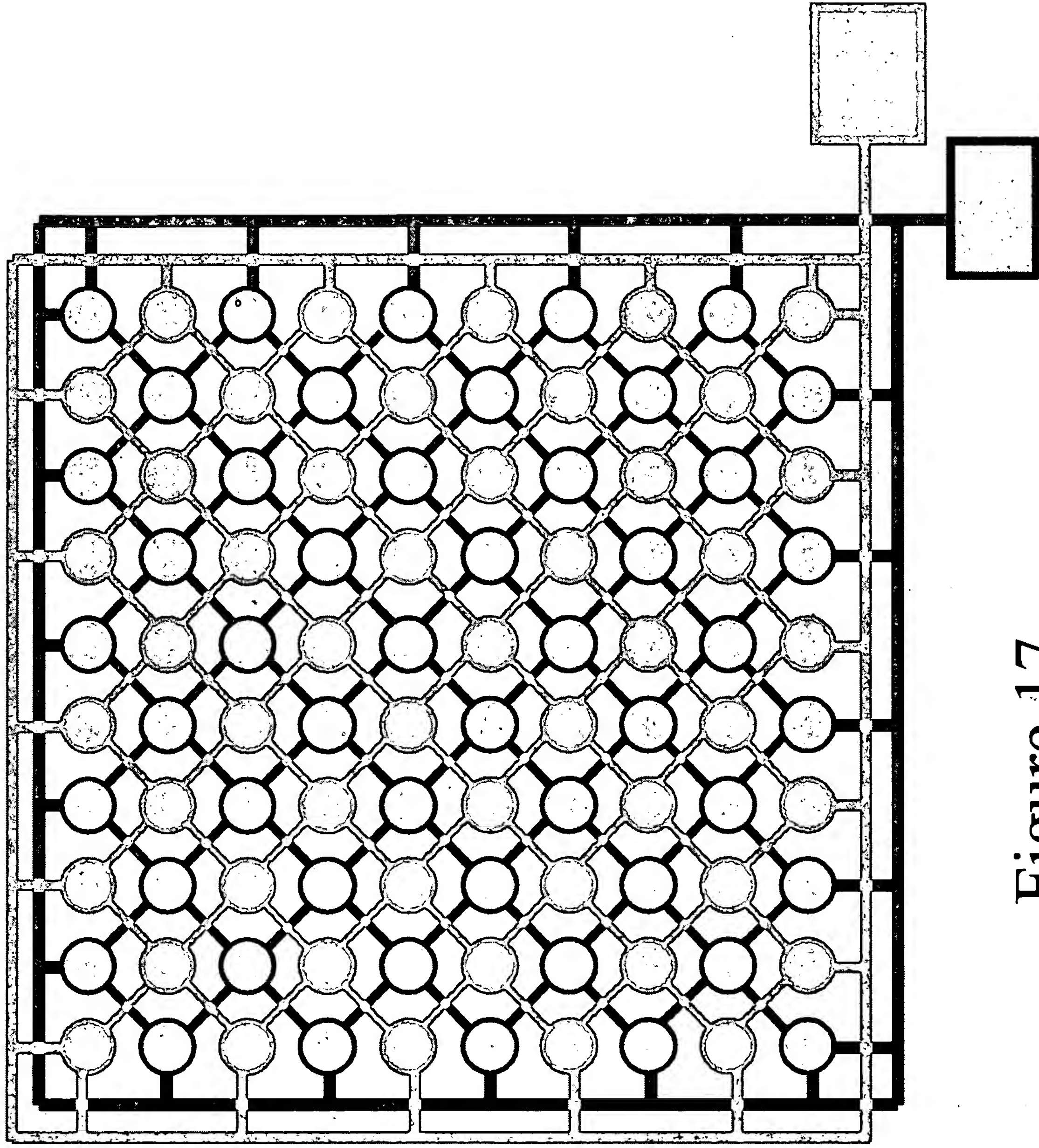


Figure 17

Figure 18

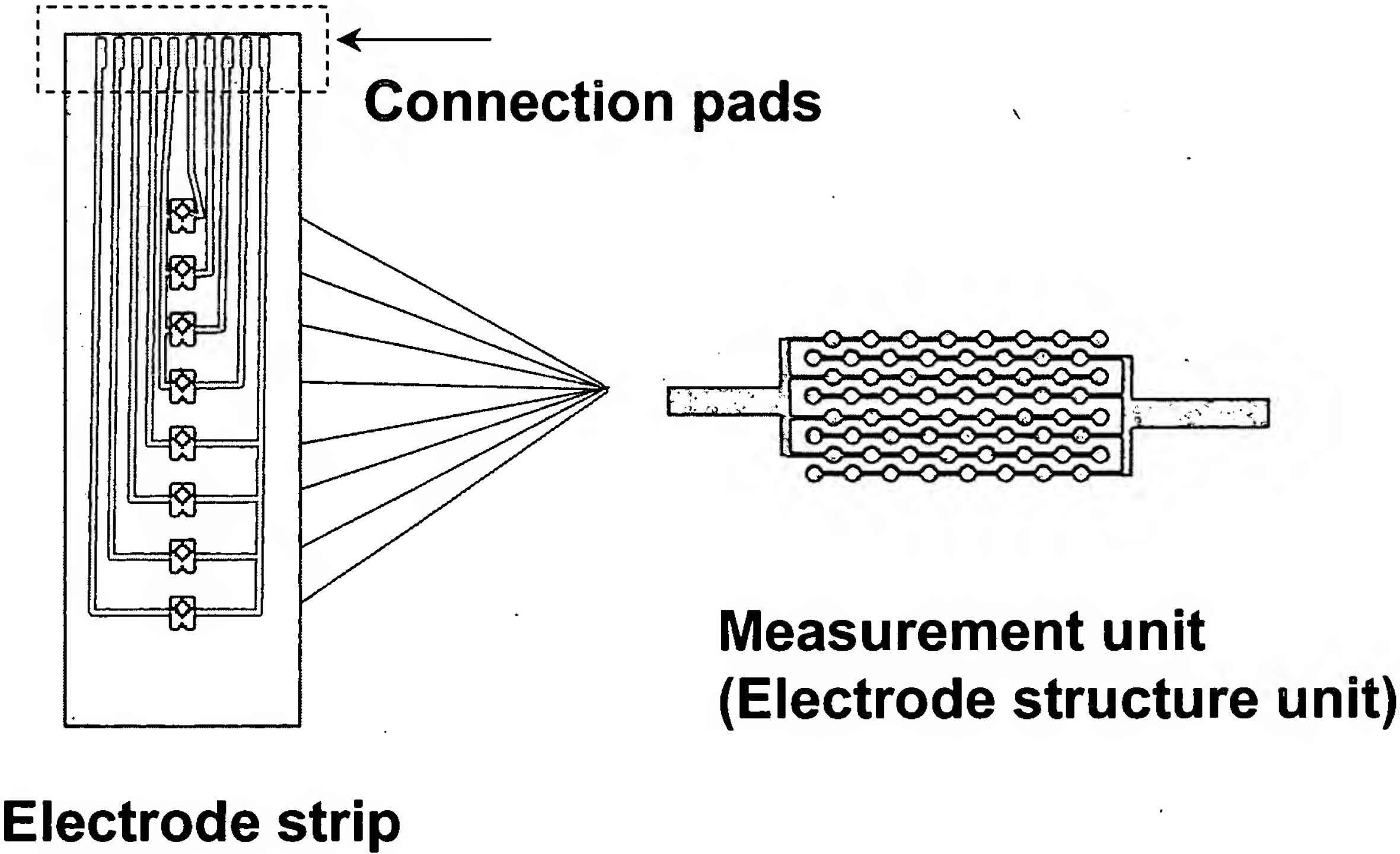


Figure 19

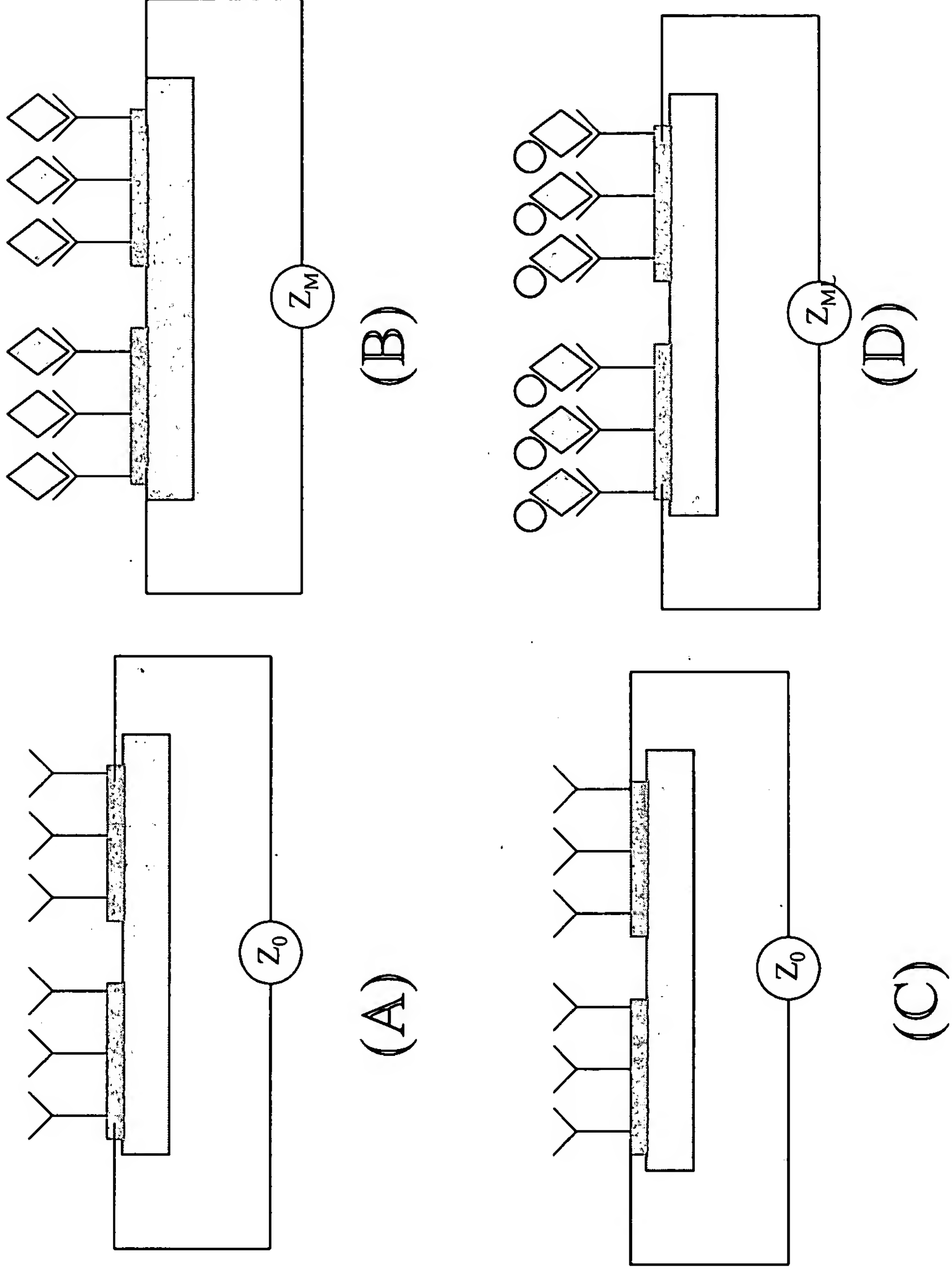
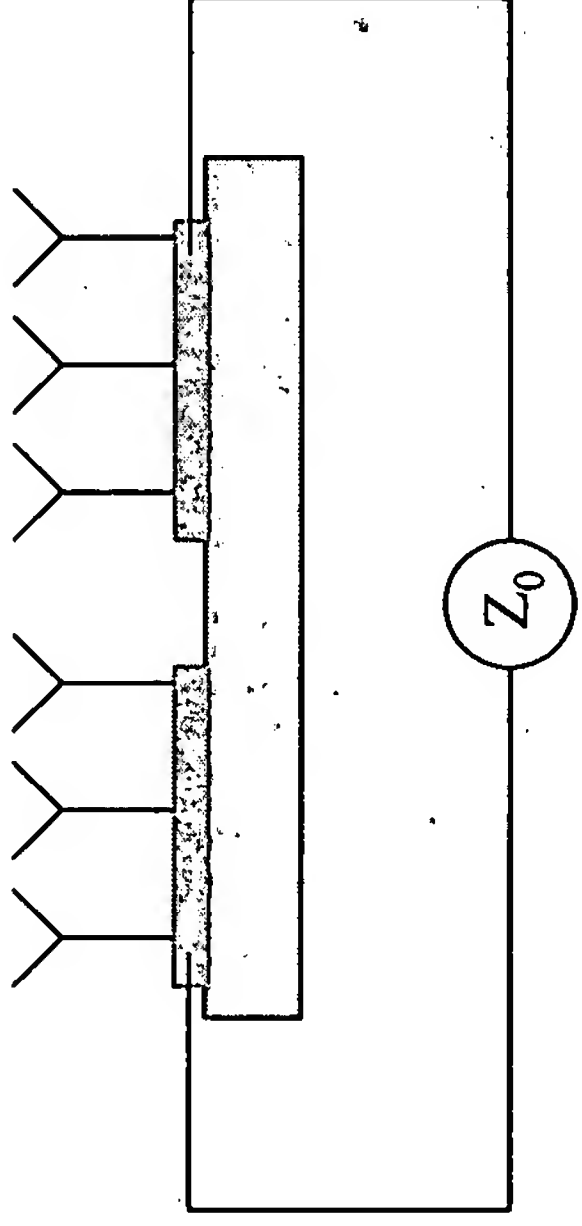
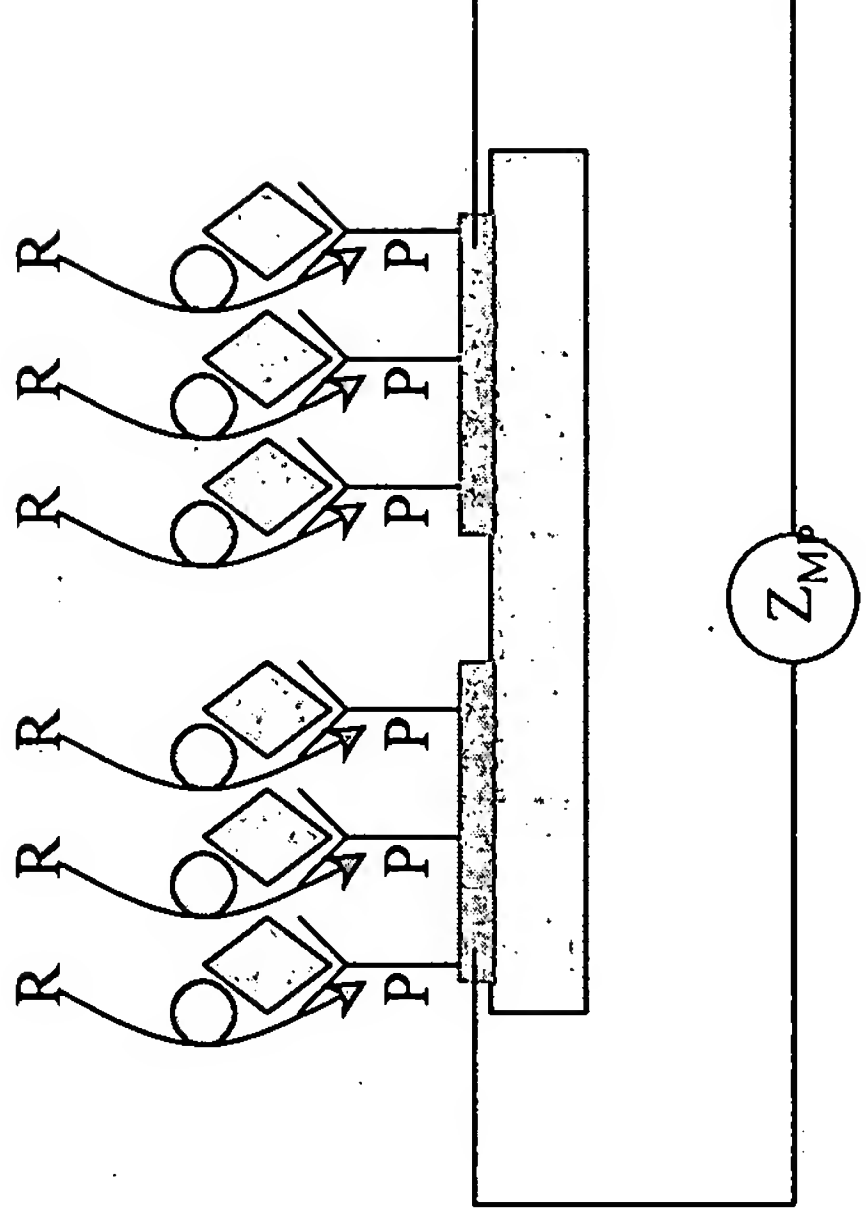


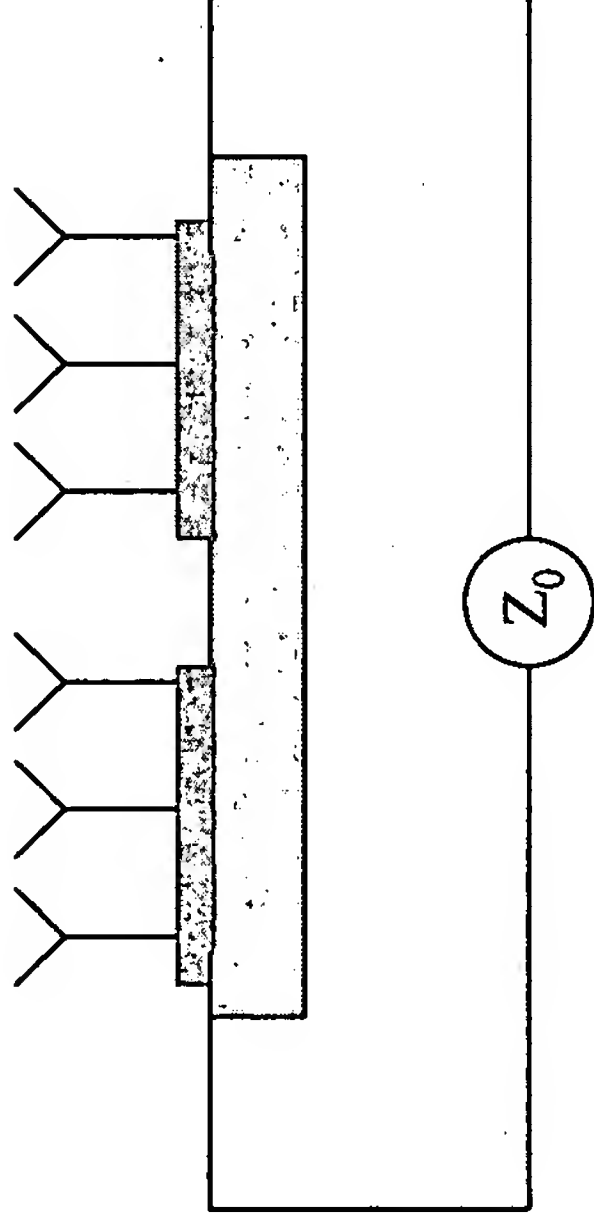
Figure 19



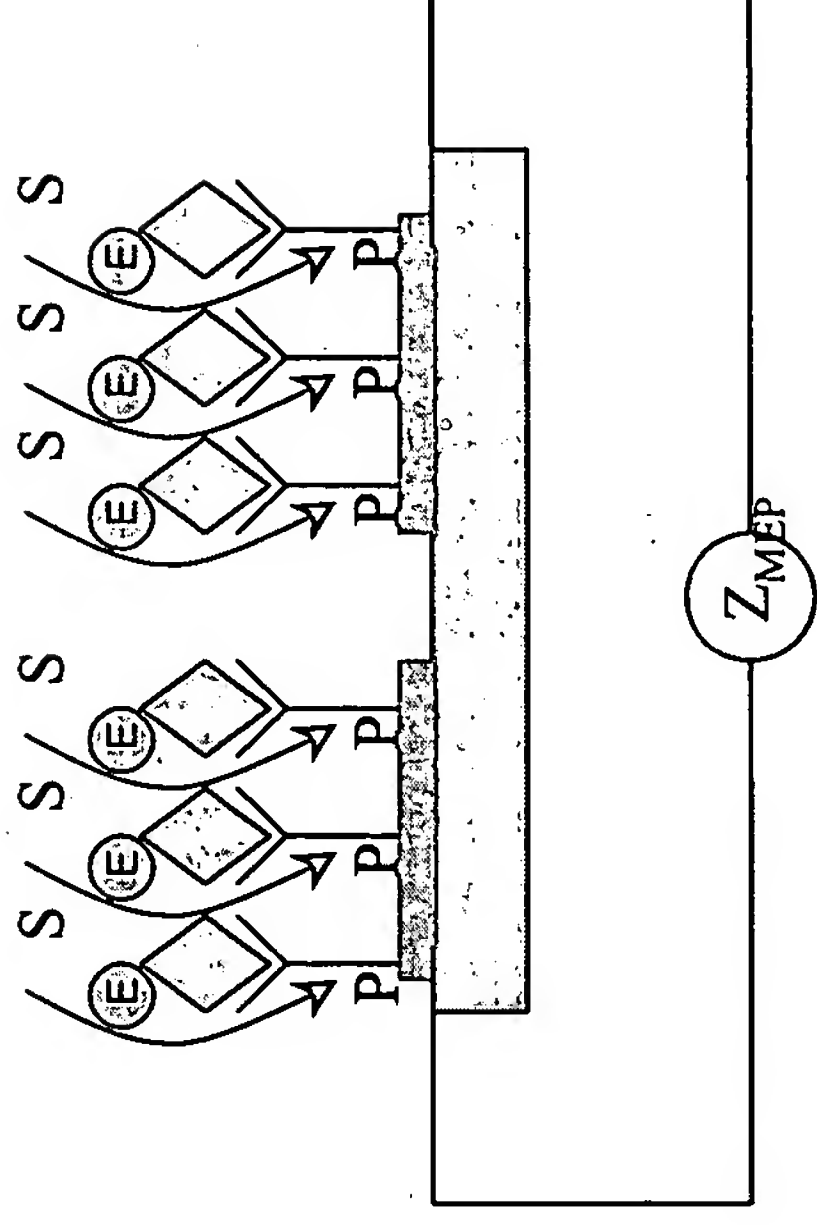
(E)



(F)



(G)



(H)

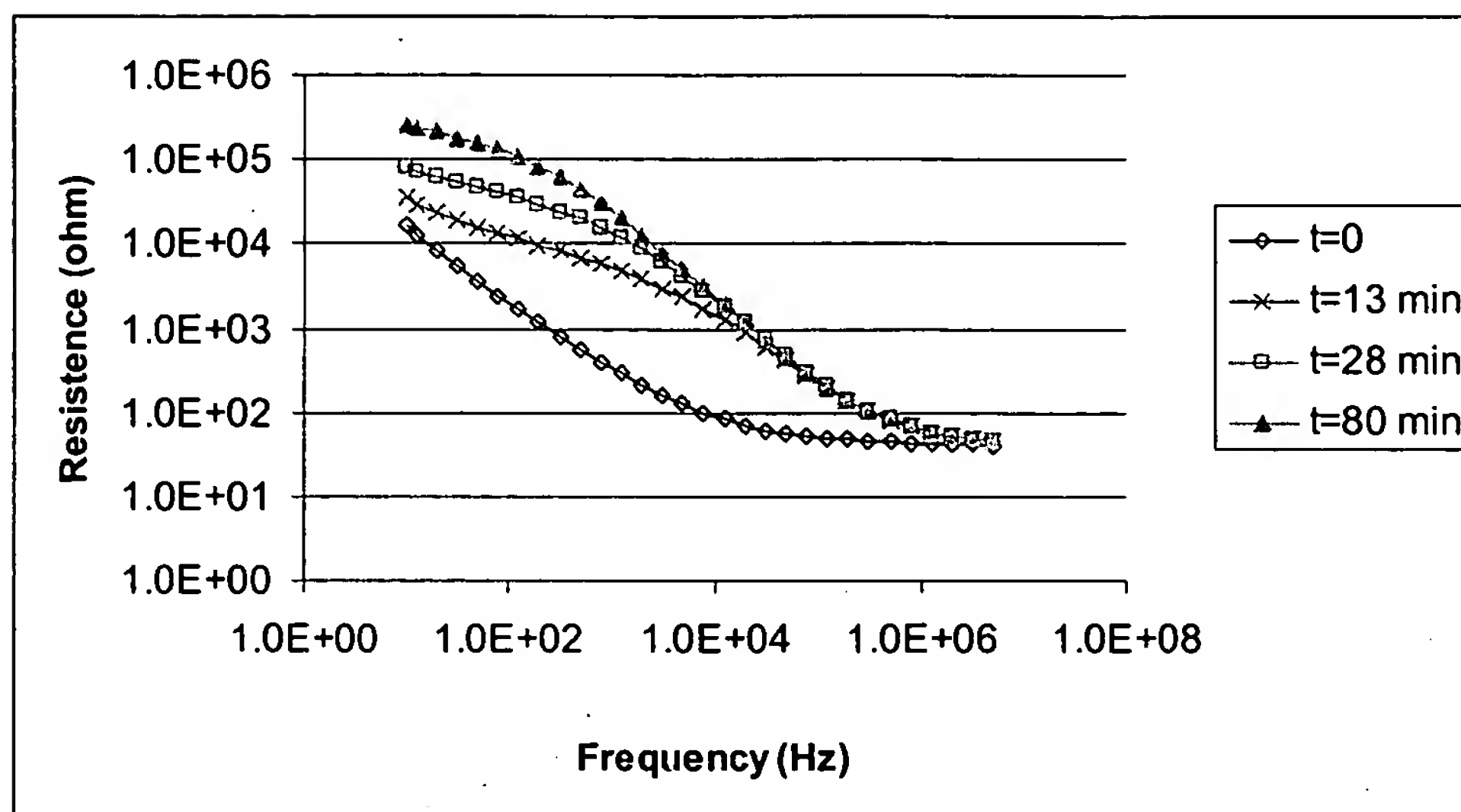


Figure 20 (A)

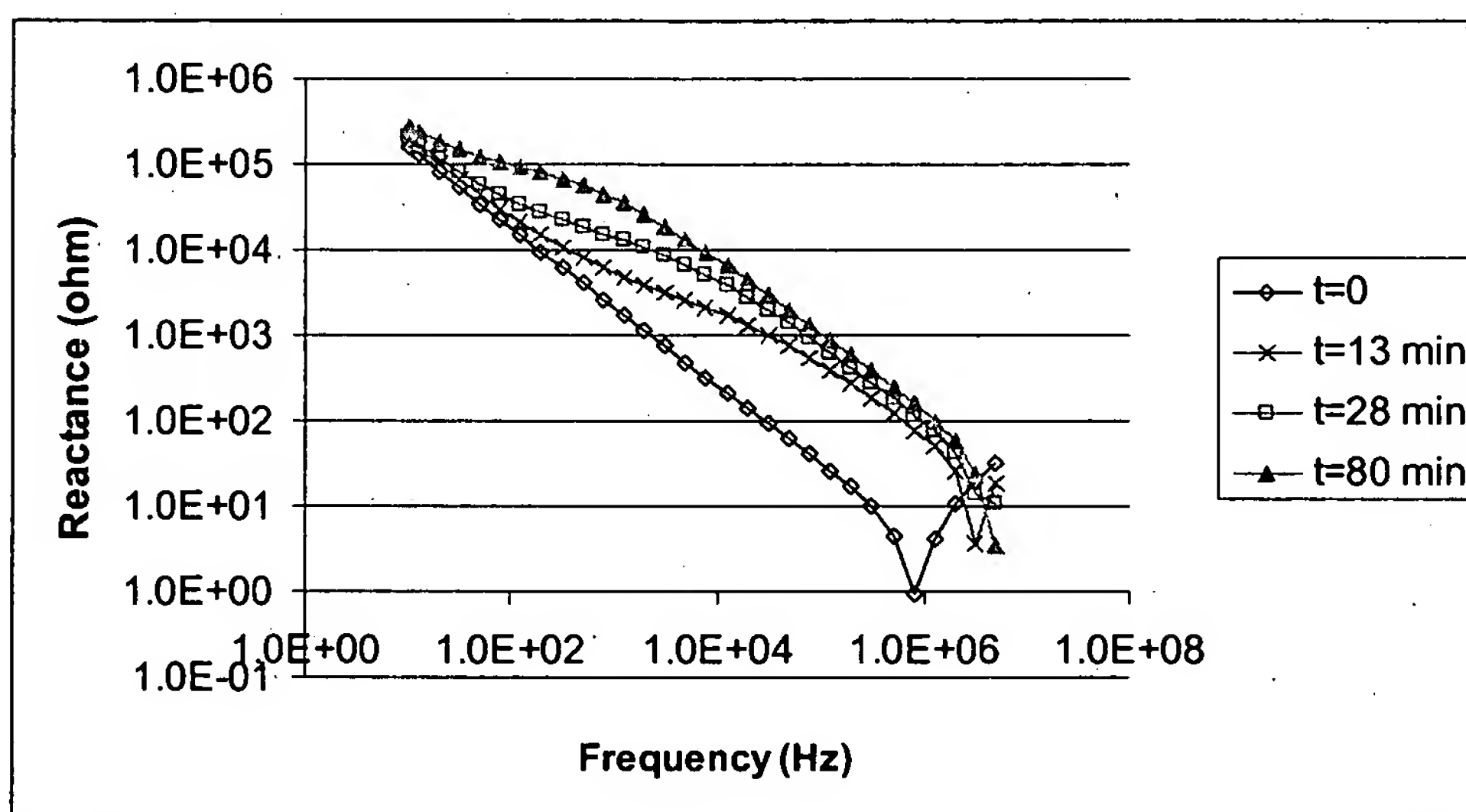


Figure 20 (B)

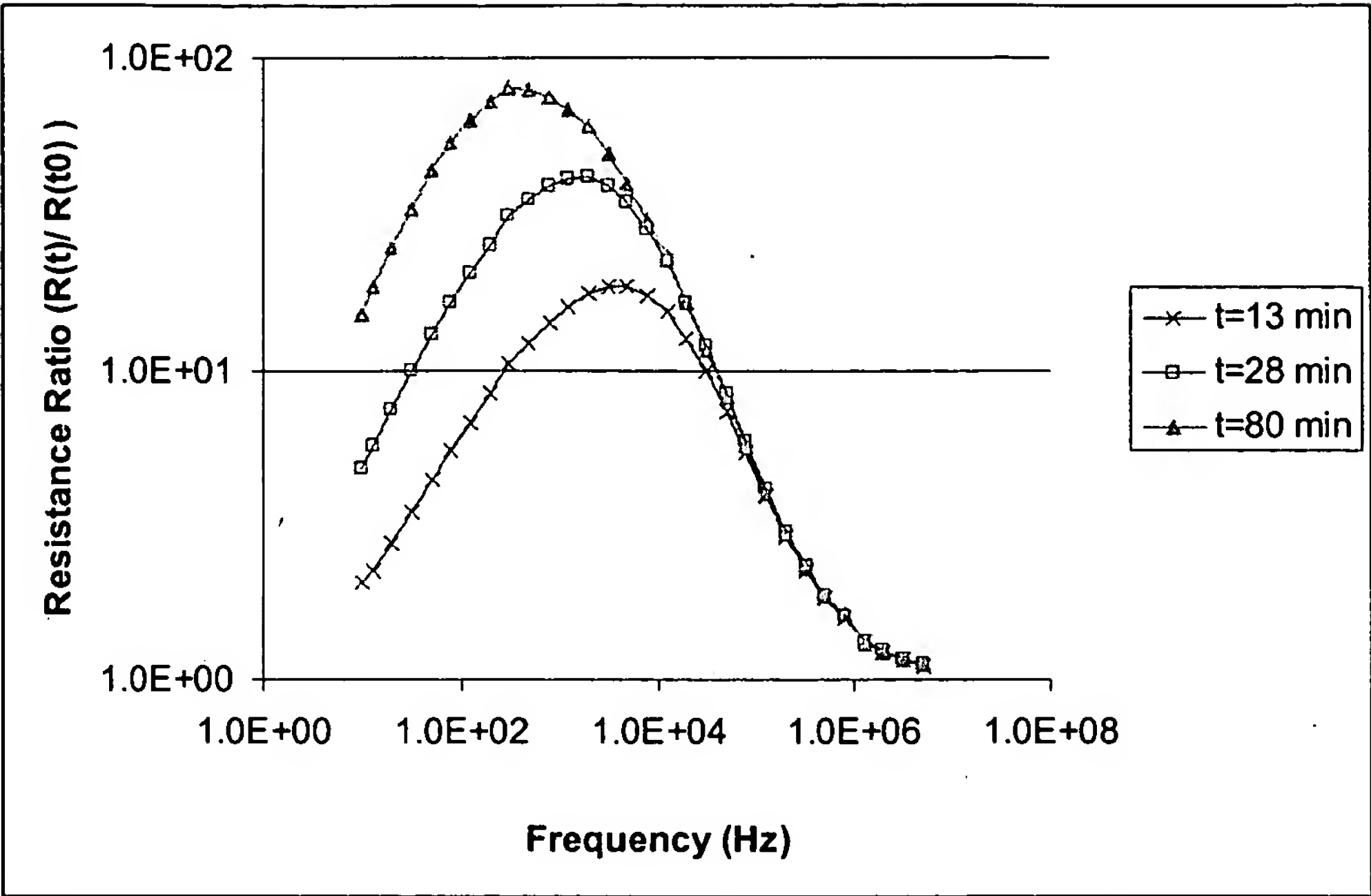


Figure 20(C)

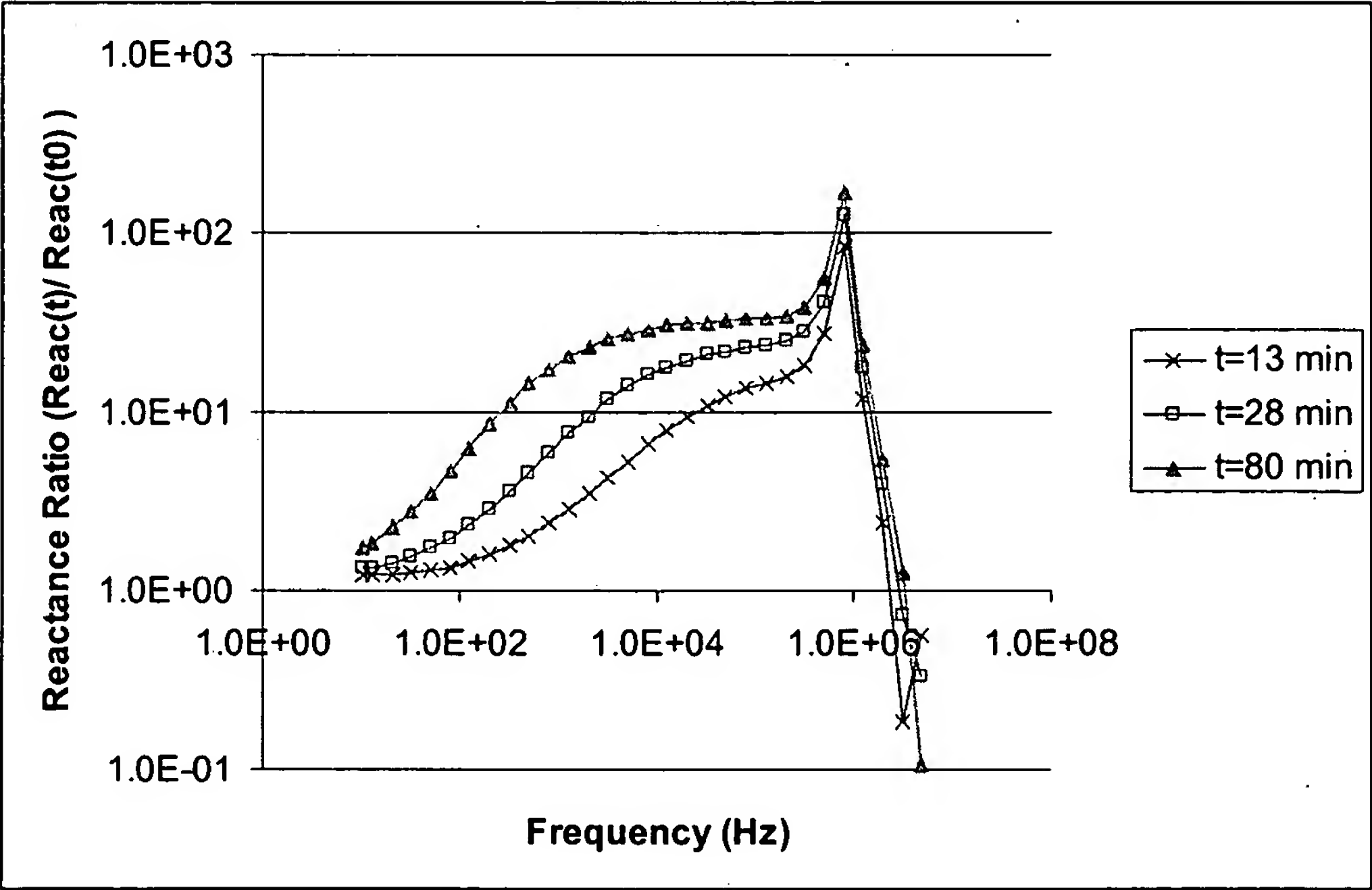


Figure 20(D)

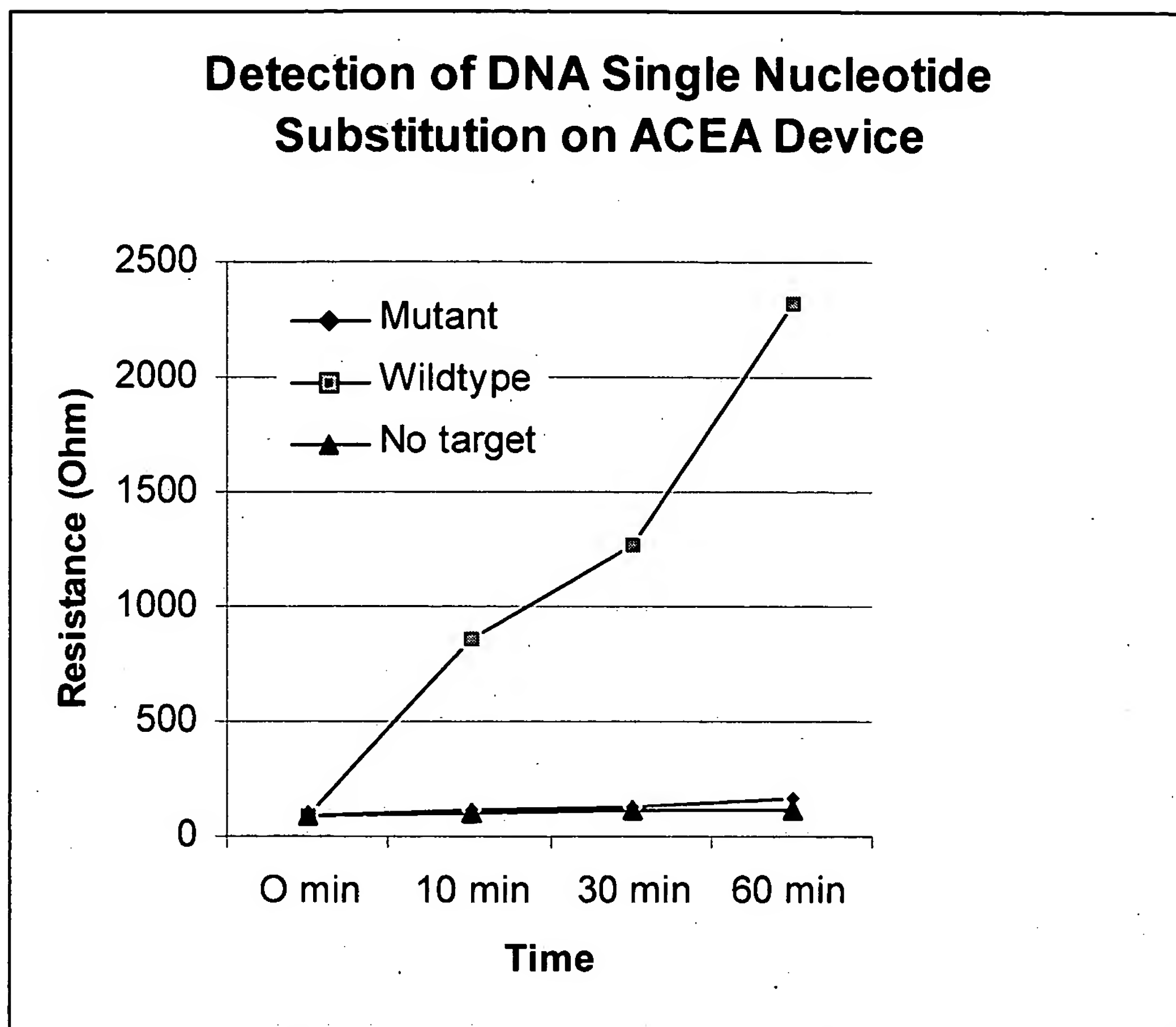
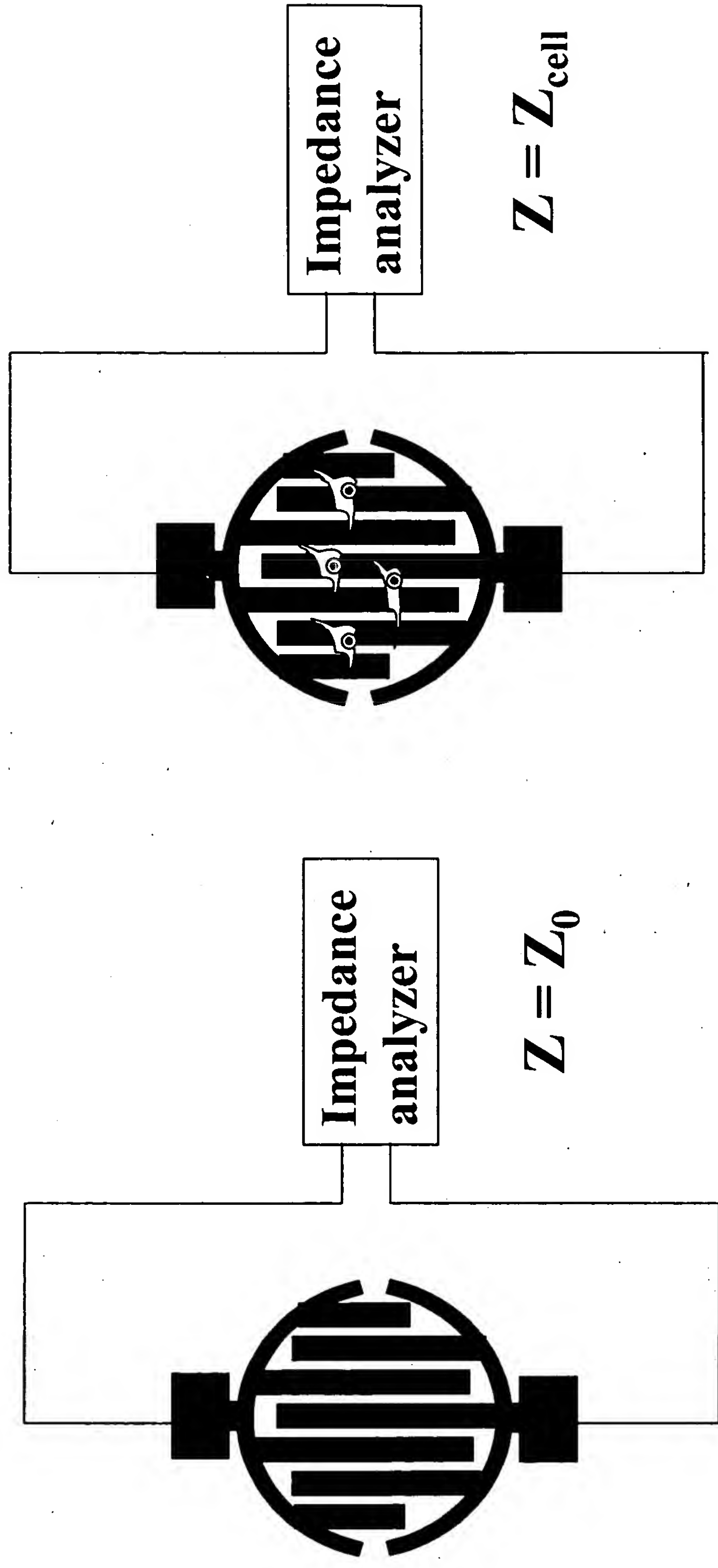


Figure 21.

Figure 22



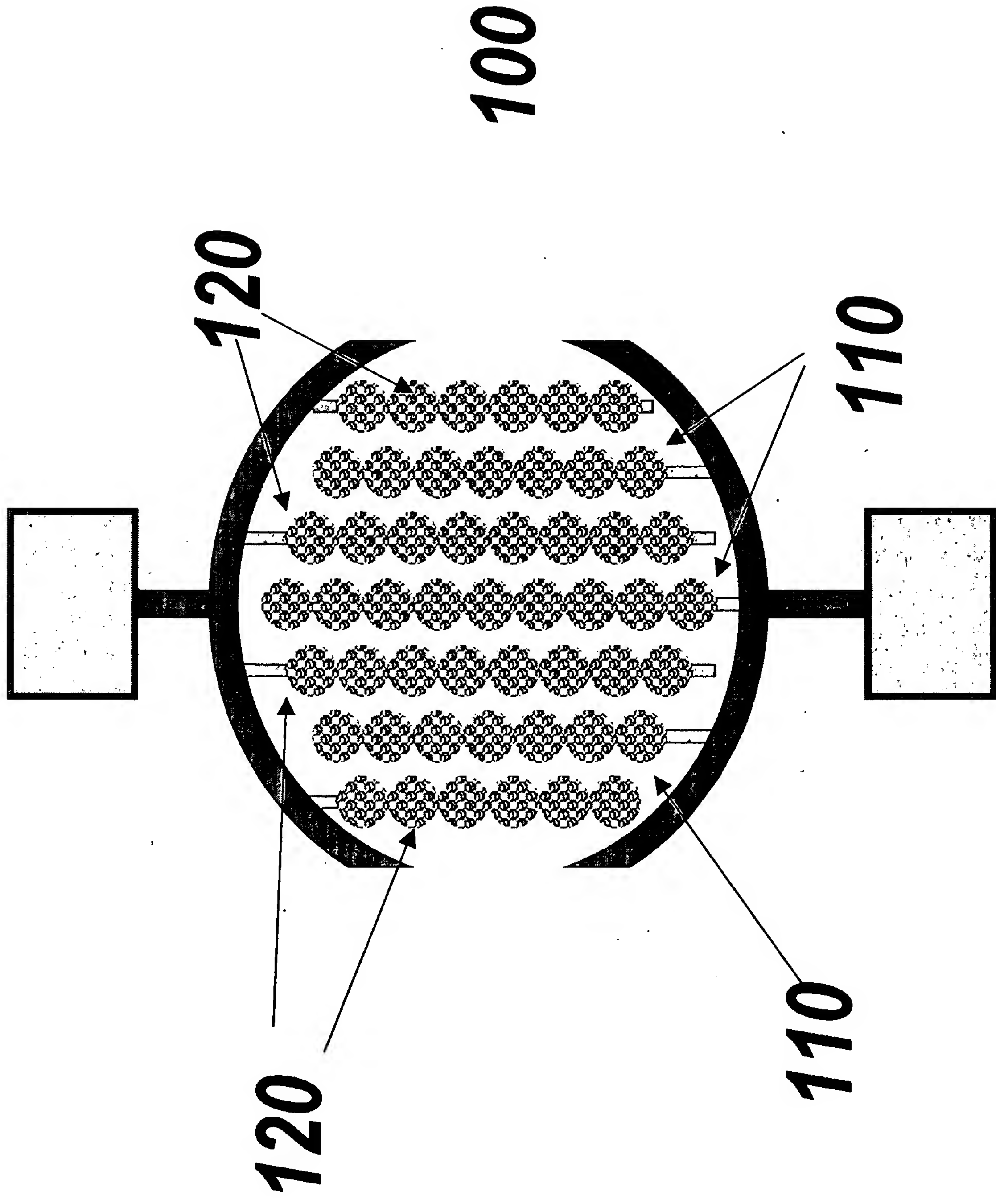


Figure 23

Figure 24

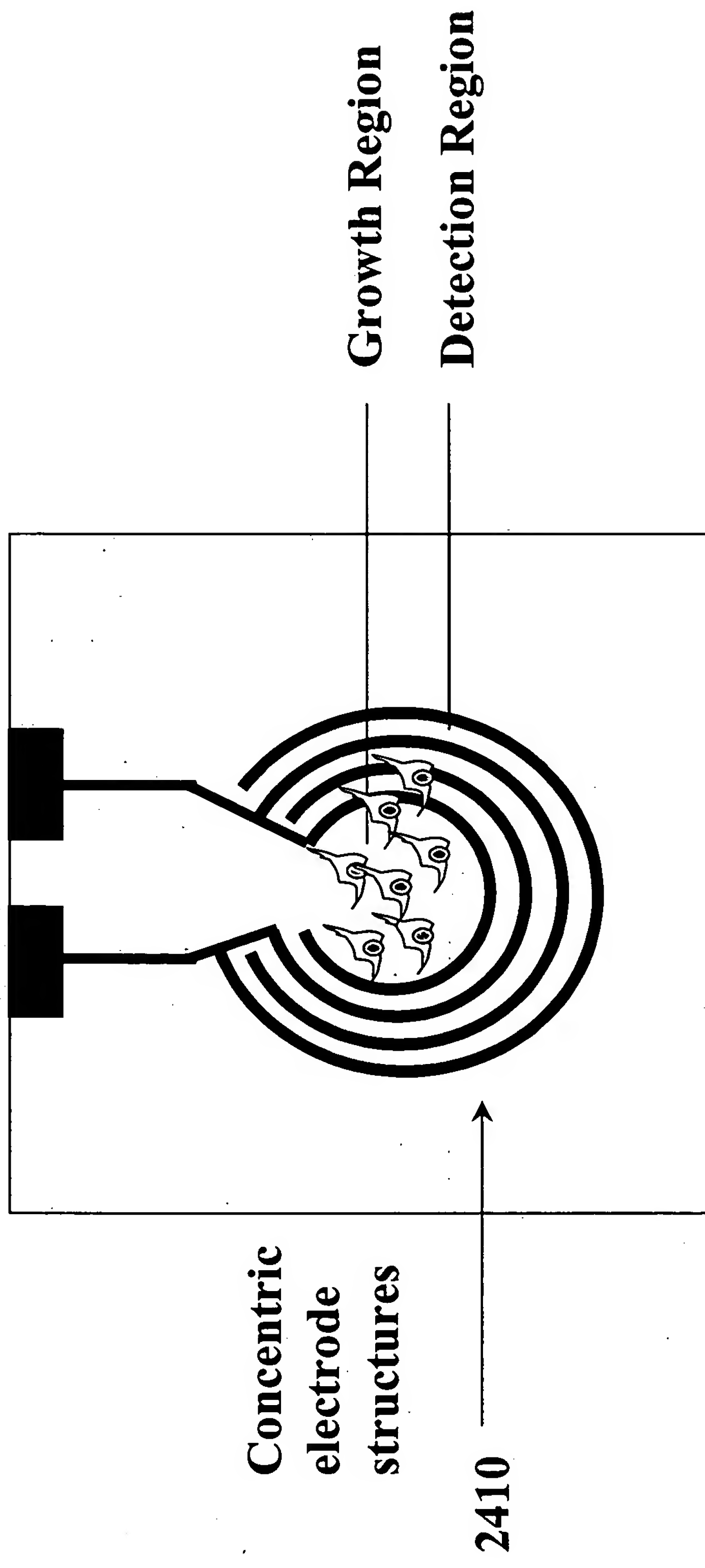


Figure 25

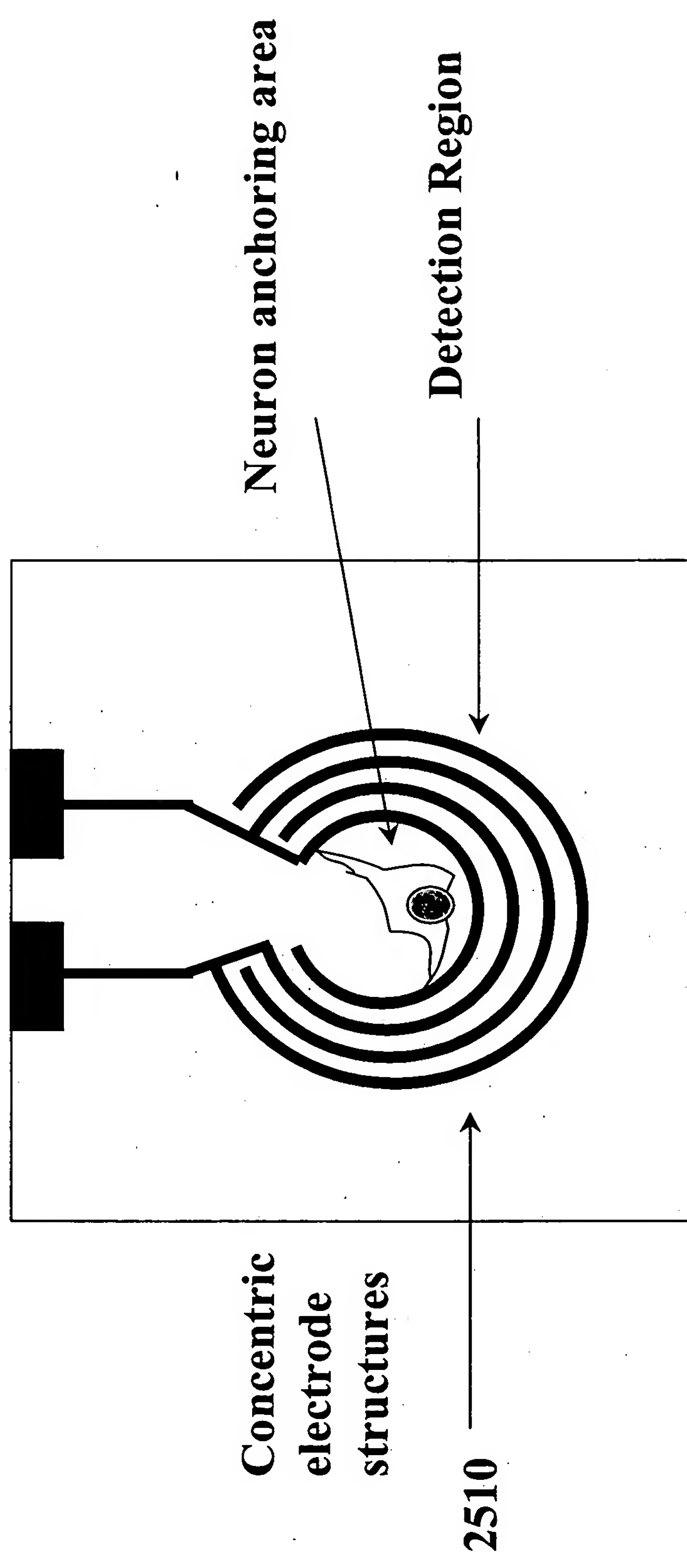
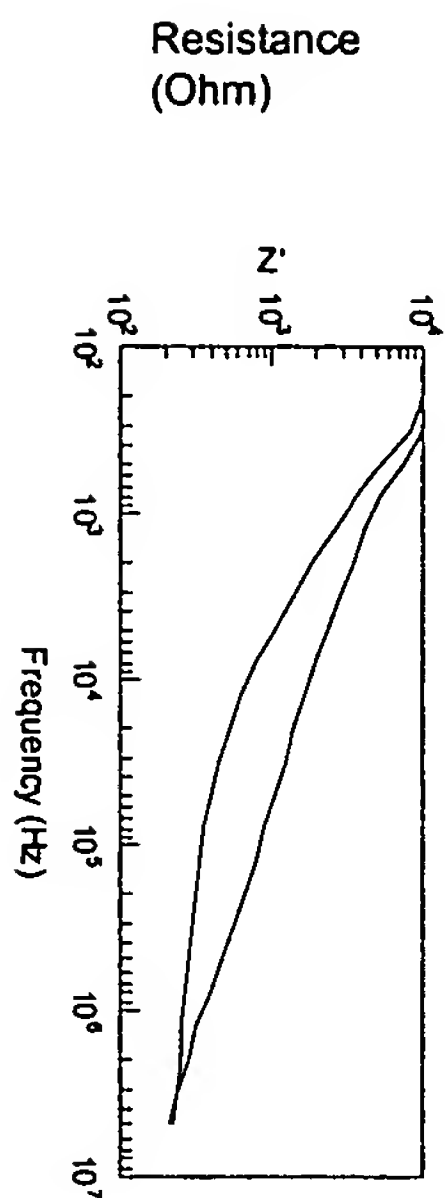
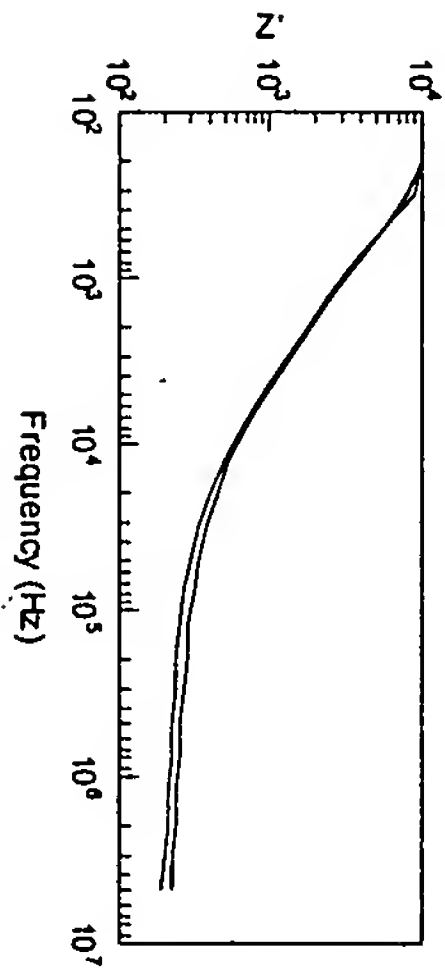


Figure 26A (1)

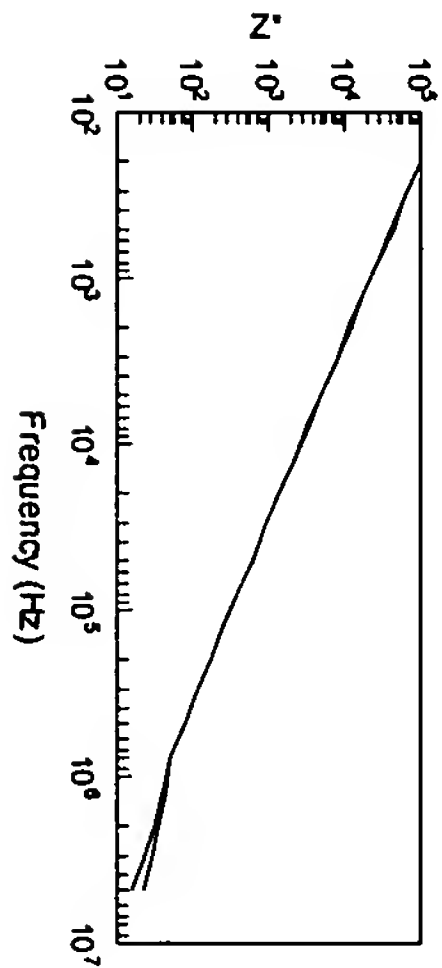
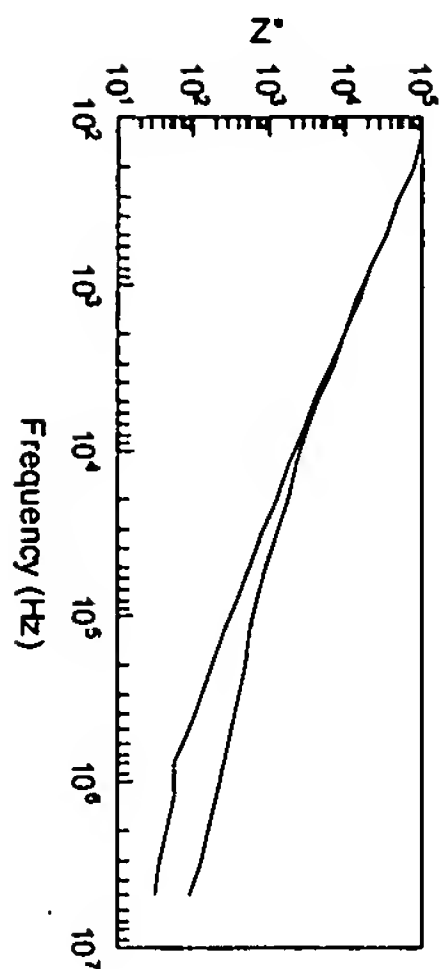
2AA



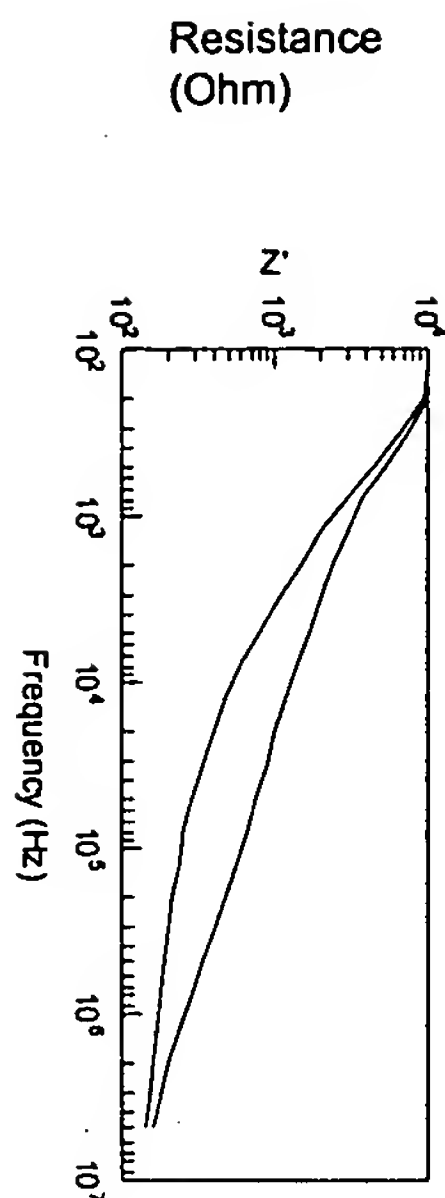
2AA (No cells attached)



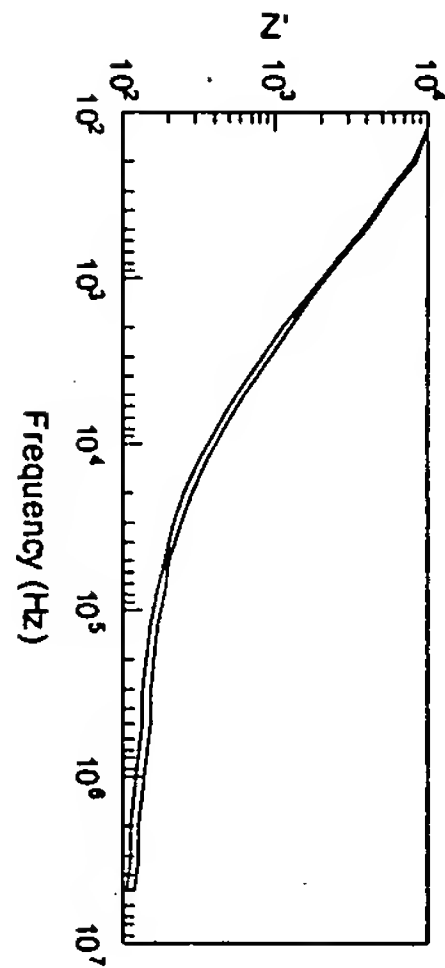
Reactance (Ohm)



2AB



2AB (No cells attached)



Reactance (Ohm)

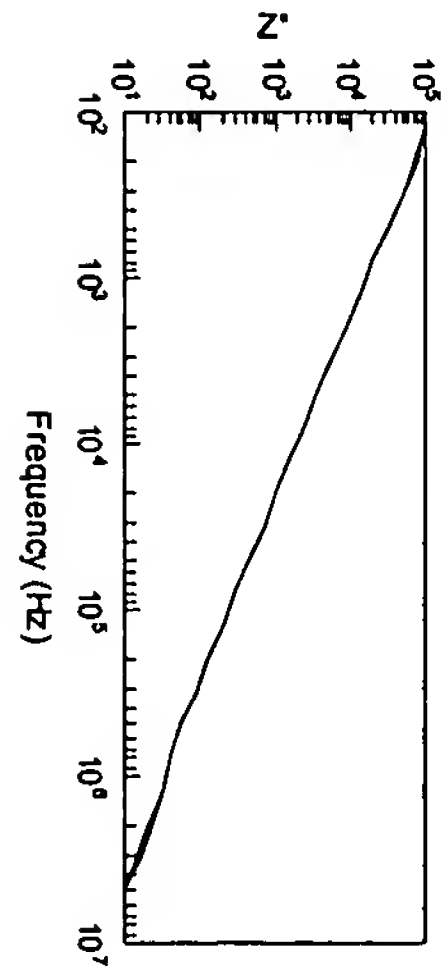
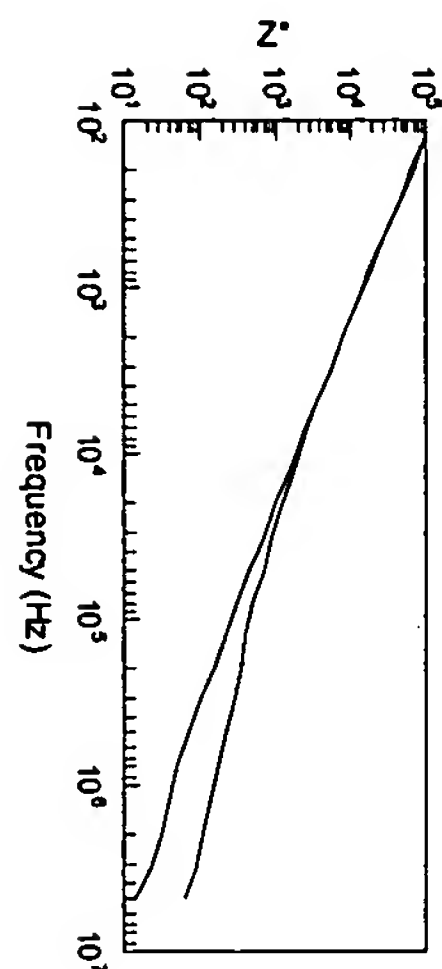
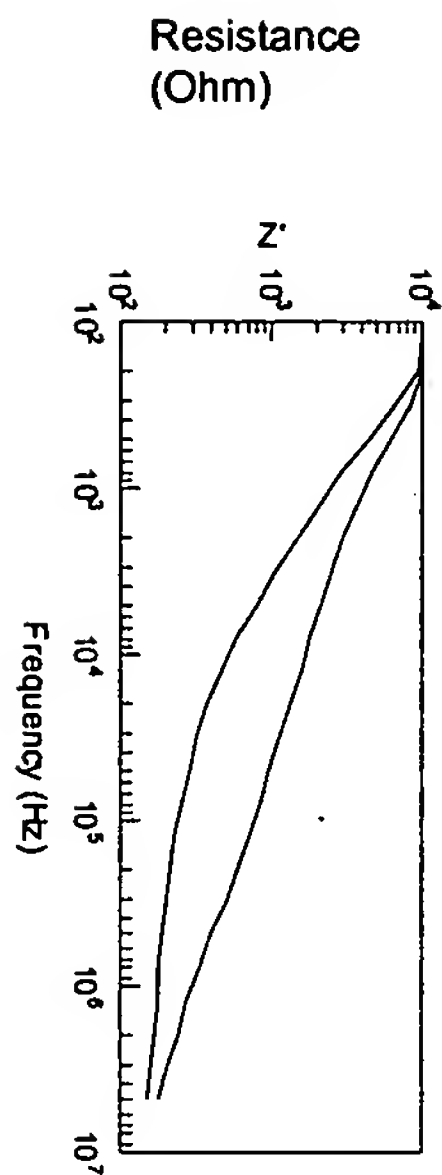
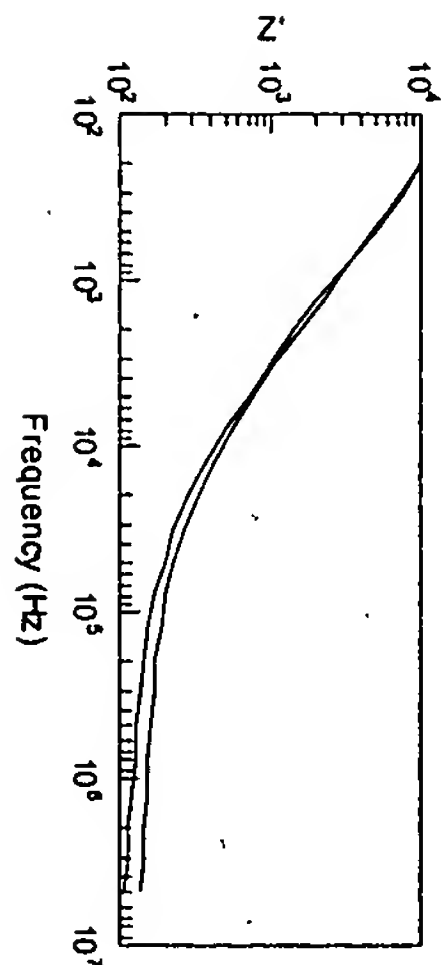


Figure 26A (2)

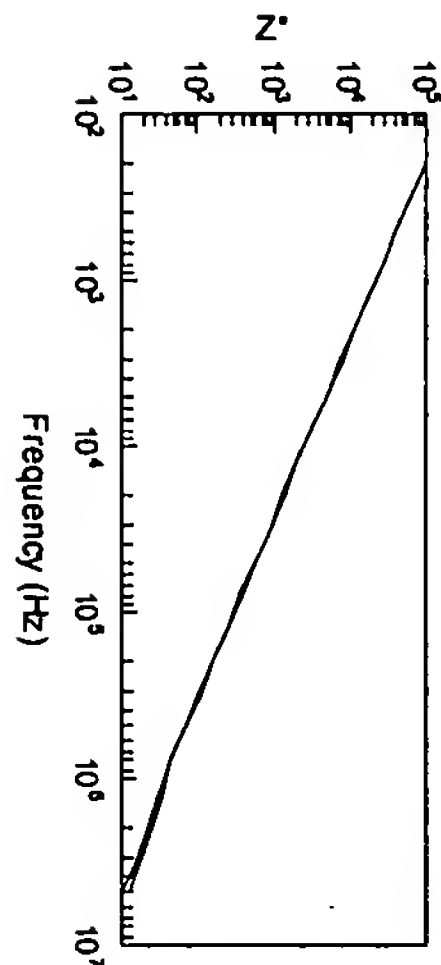
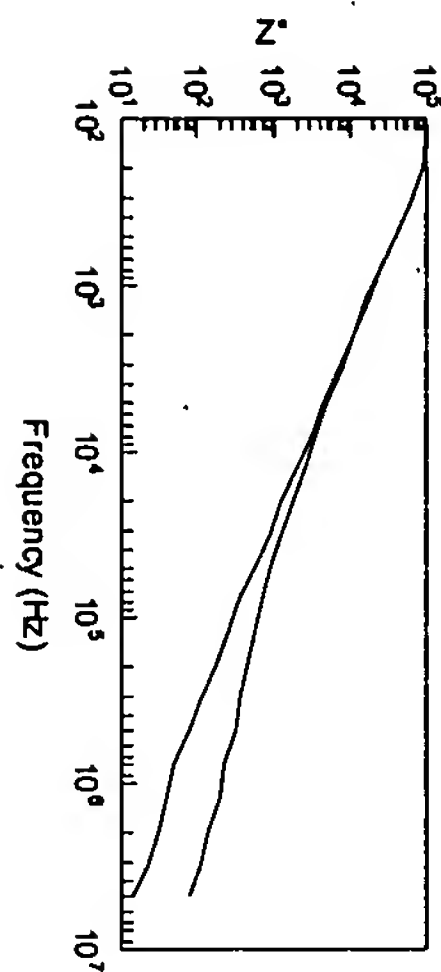
2AC



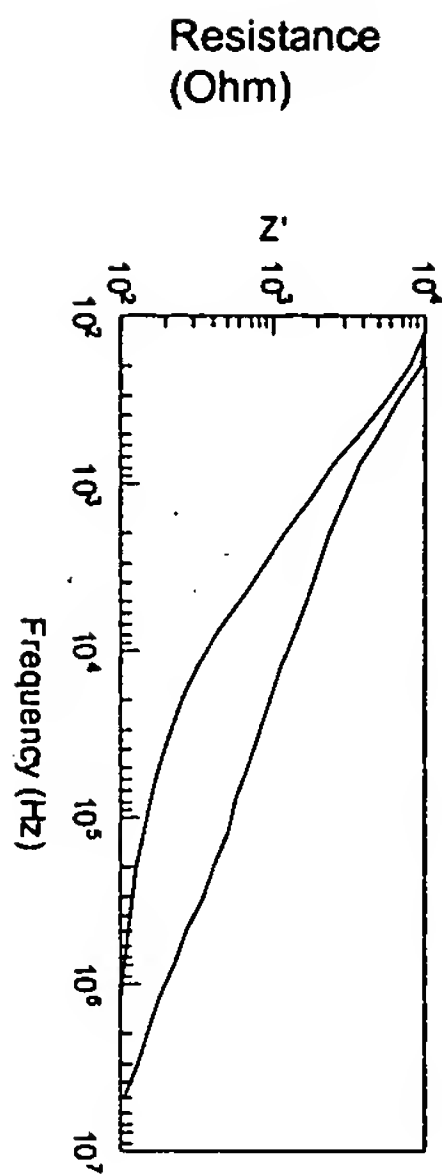
2AC No Cells attached



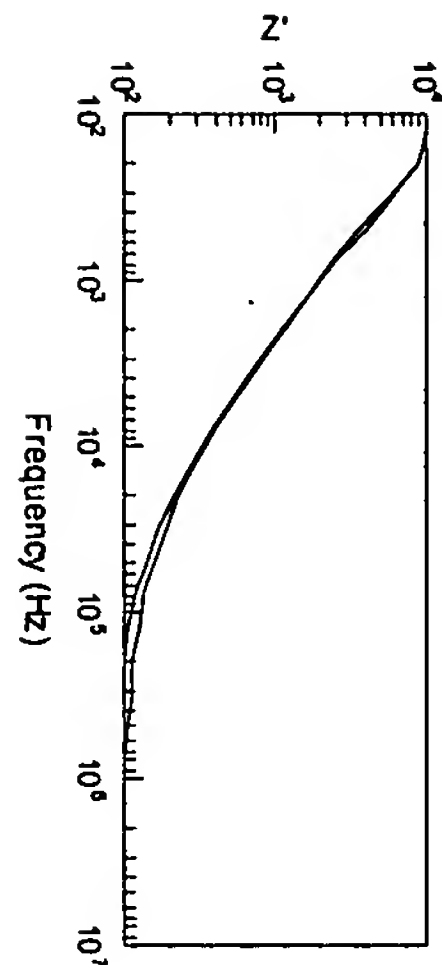
Reactance (Ohm)



2AD



2AD (No cells attached)



Reactance (Ohm)

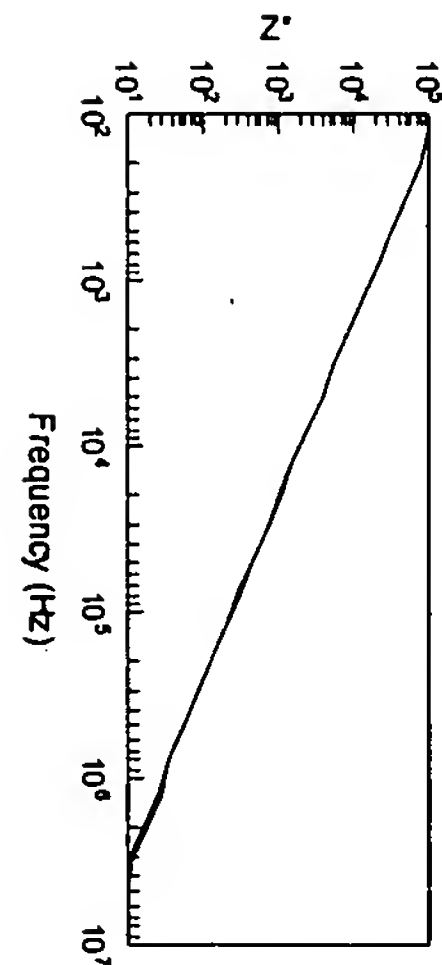
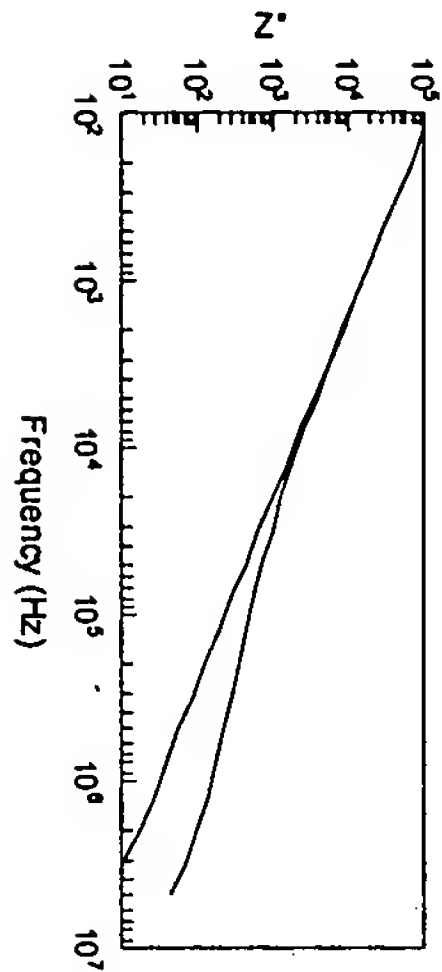
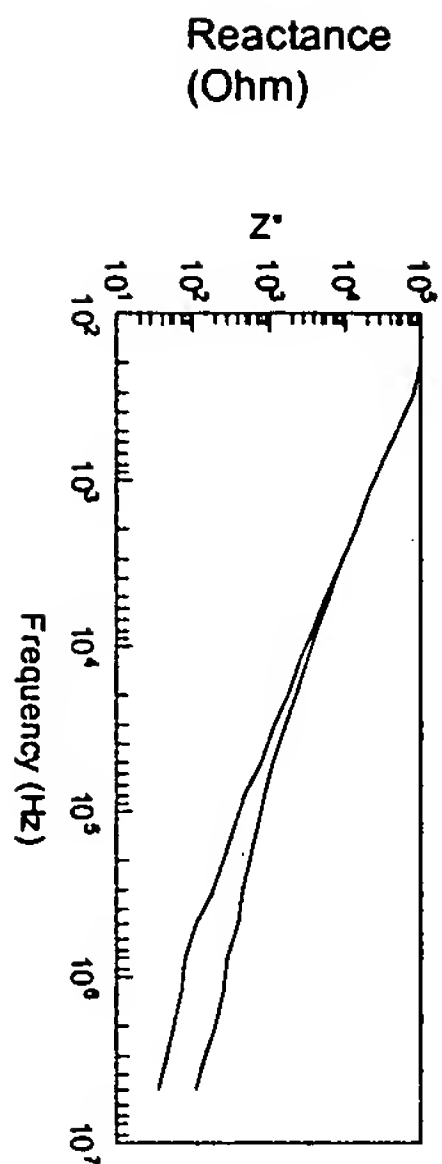
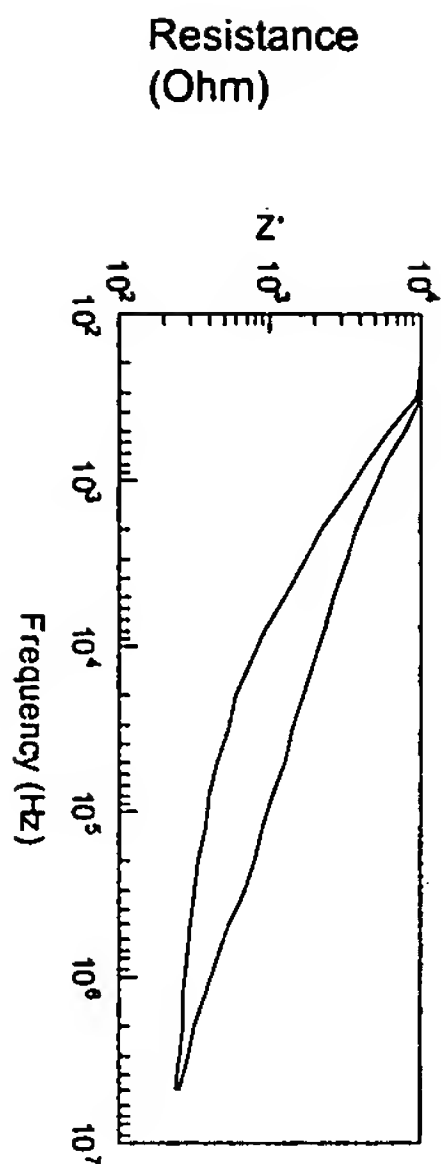
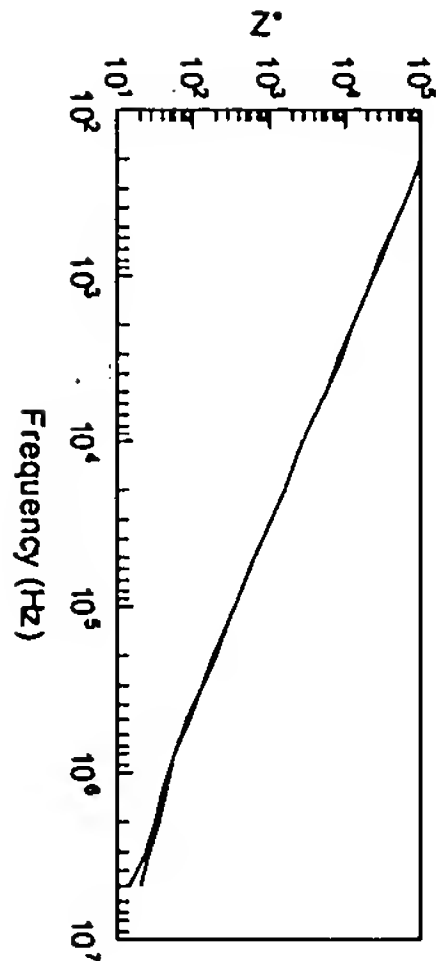
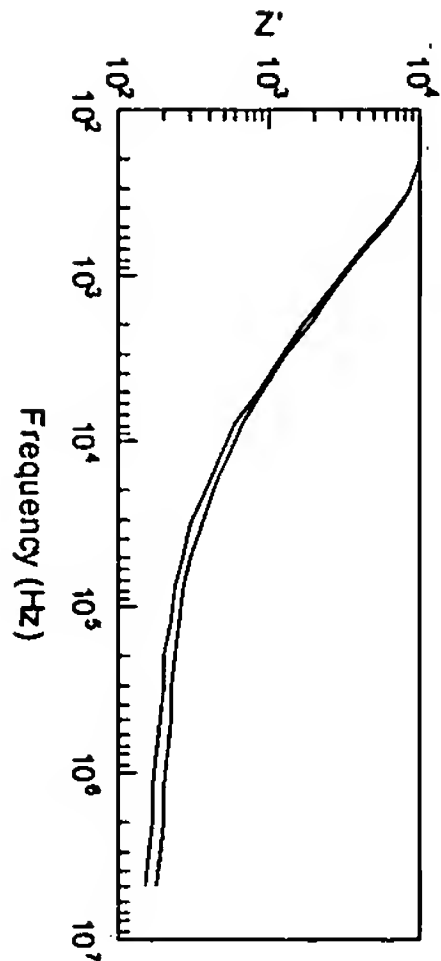


Figure 26A (3)

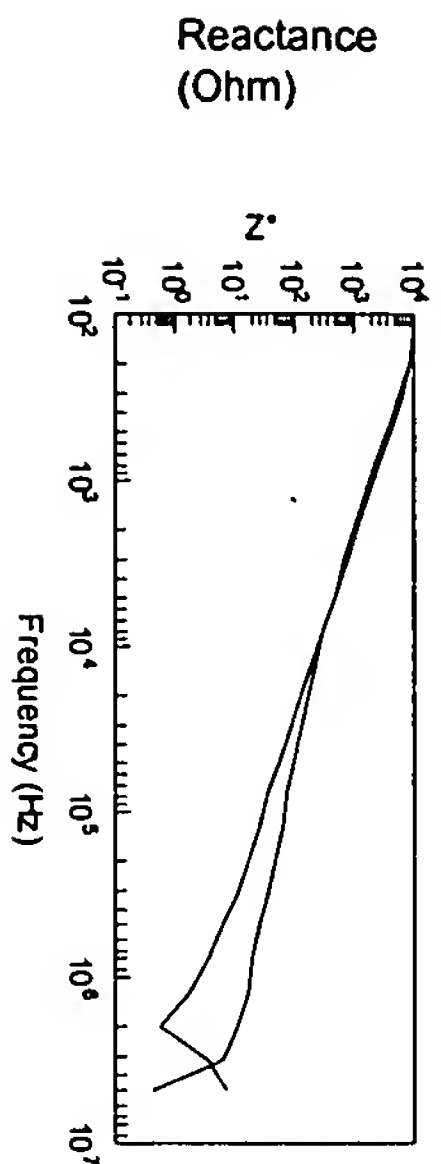
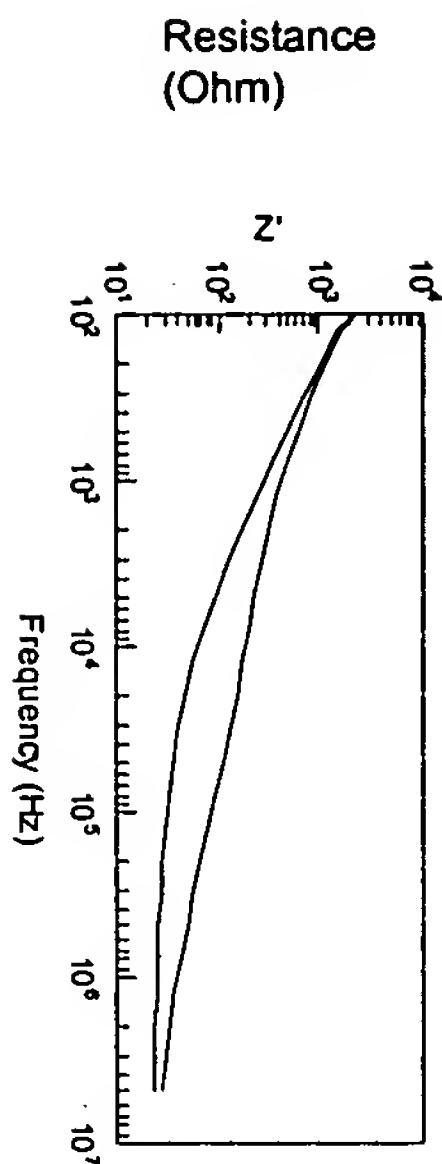
3A



3A (No cells attached)



2BE



2BE No cells attached

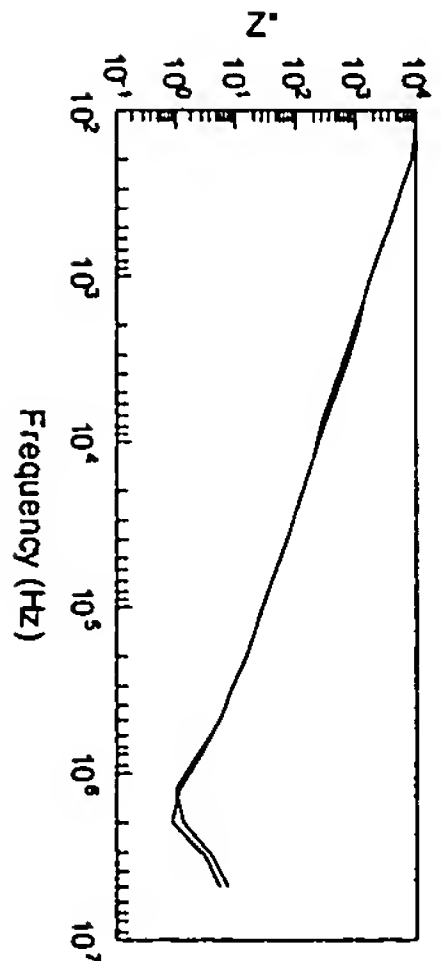
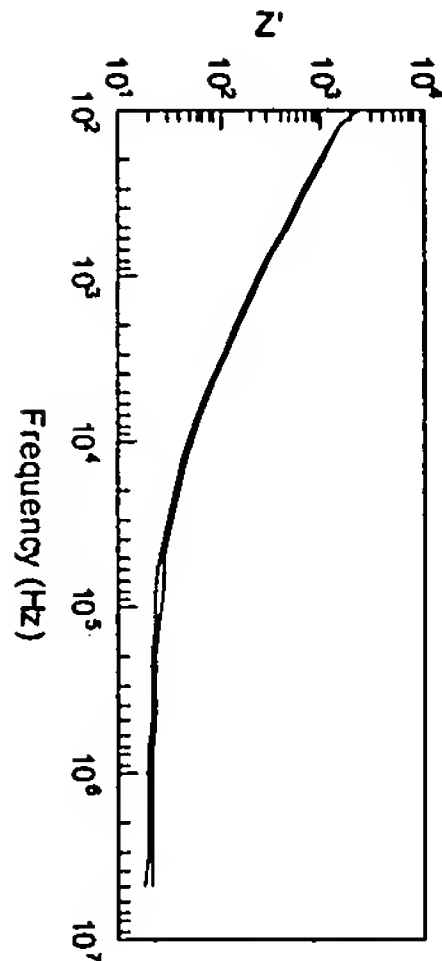
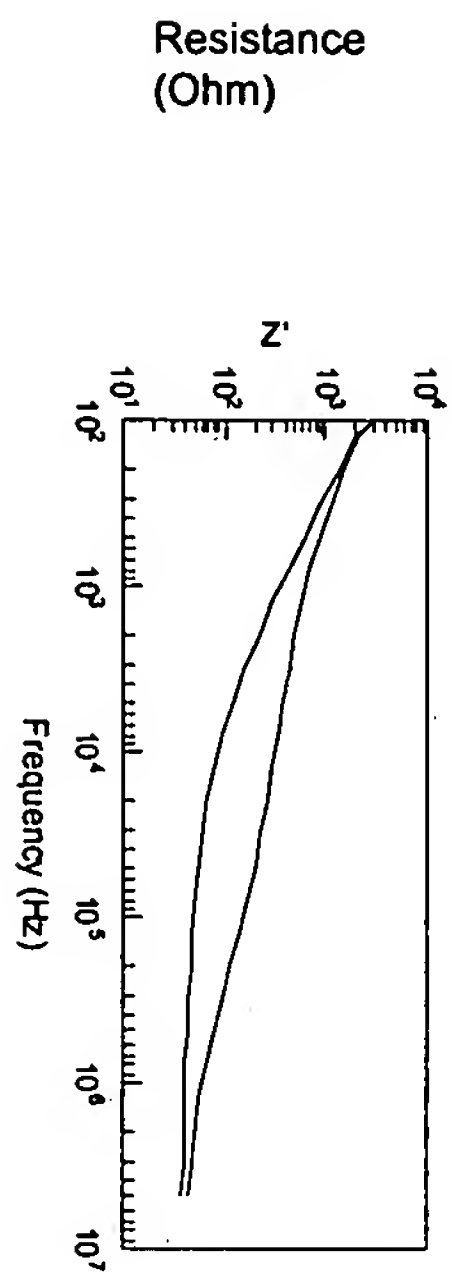
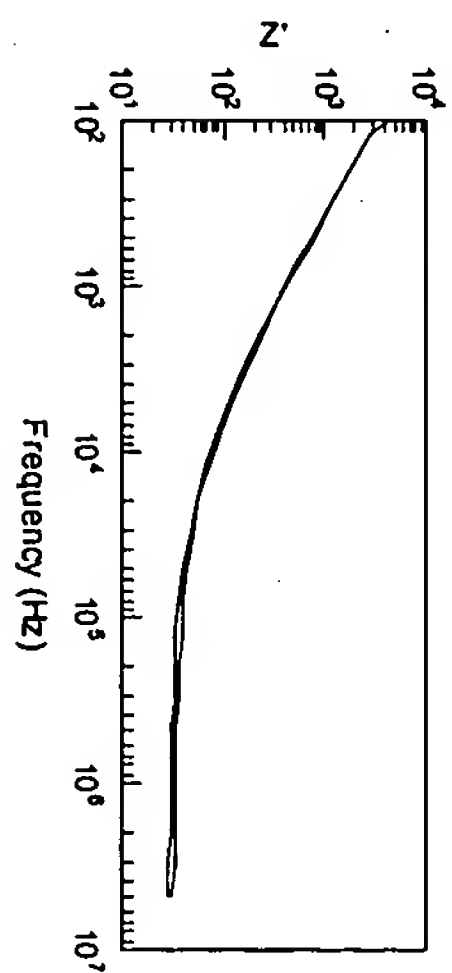


Figure 26A (4)

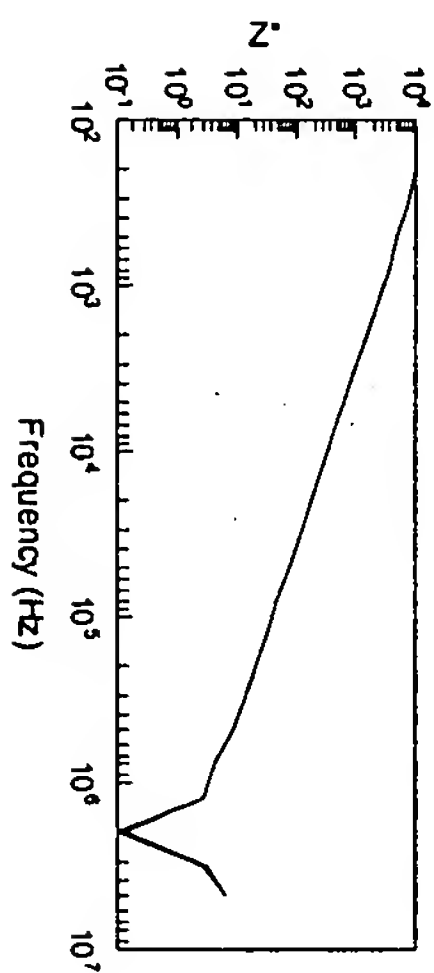
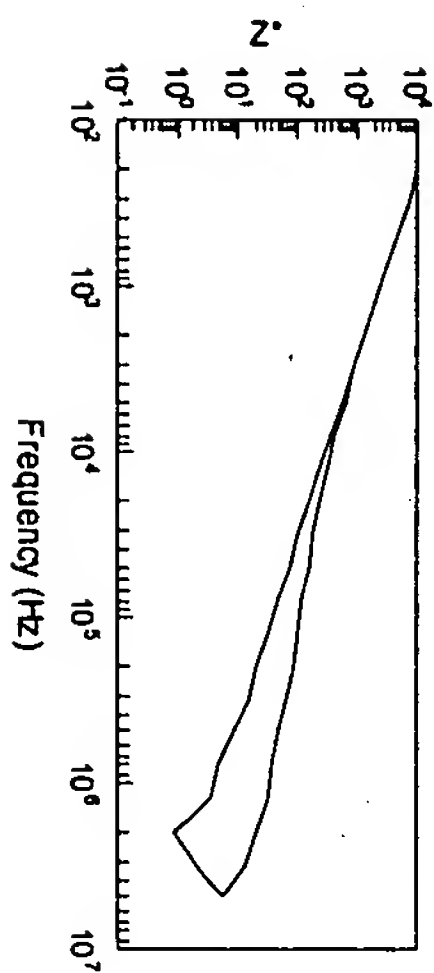
3B



3B No cells attached

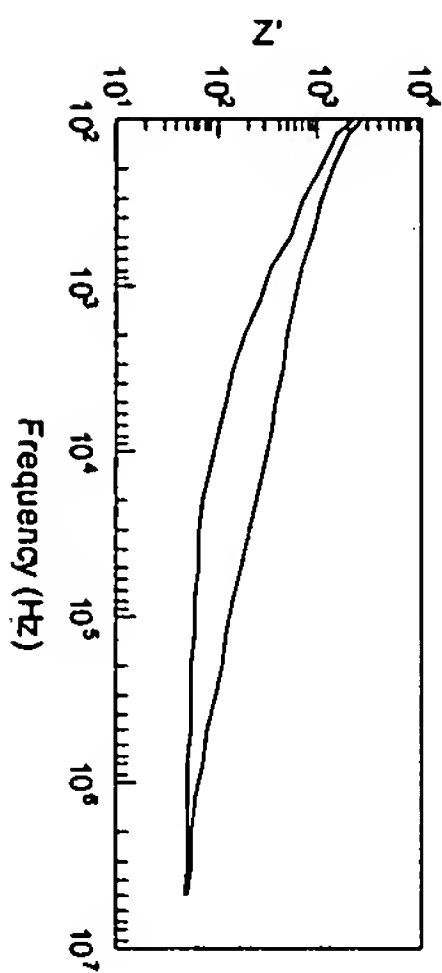


Reactance (Ohm)

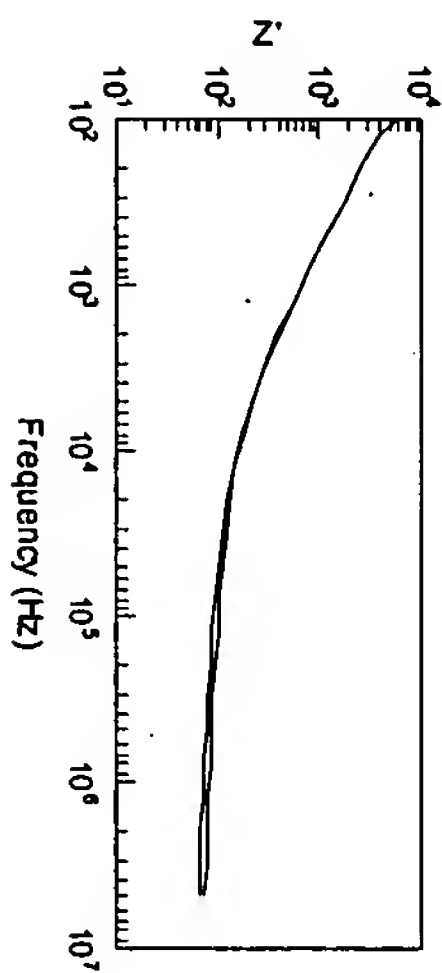


3C

Resistance (Ohm)



3C No cells attached



Reactance (Ohm)

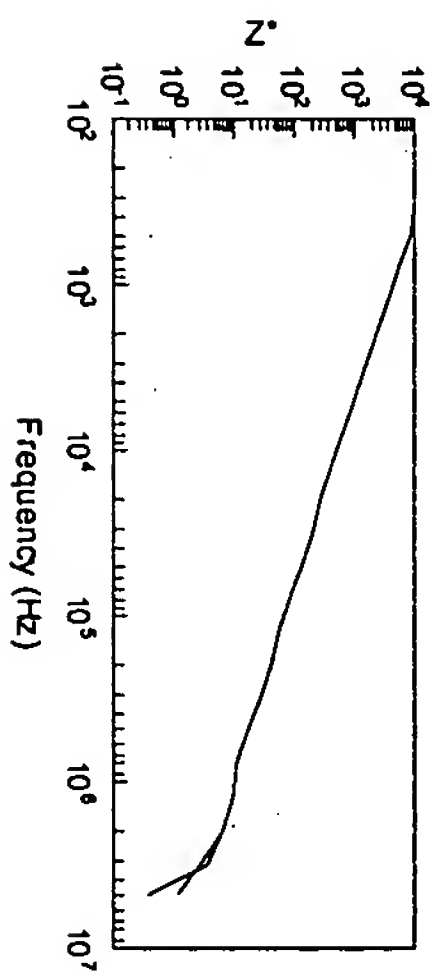
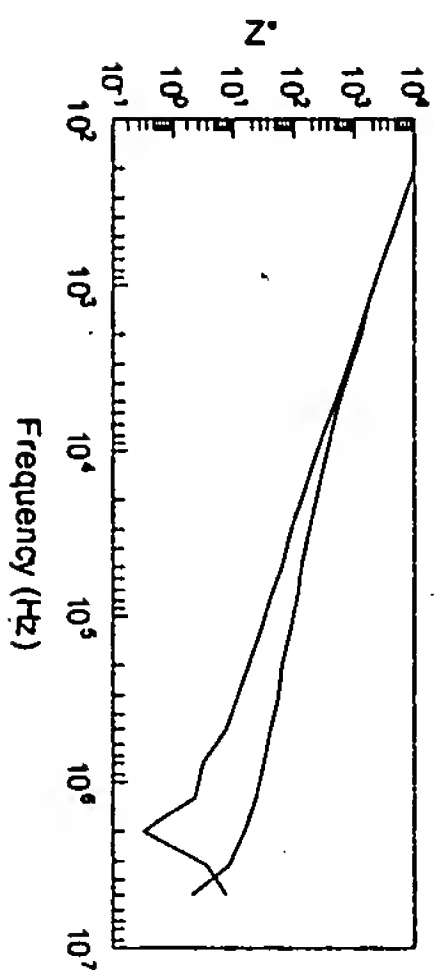


Figure 26B

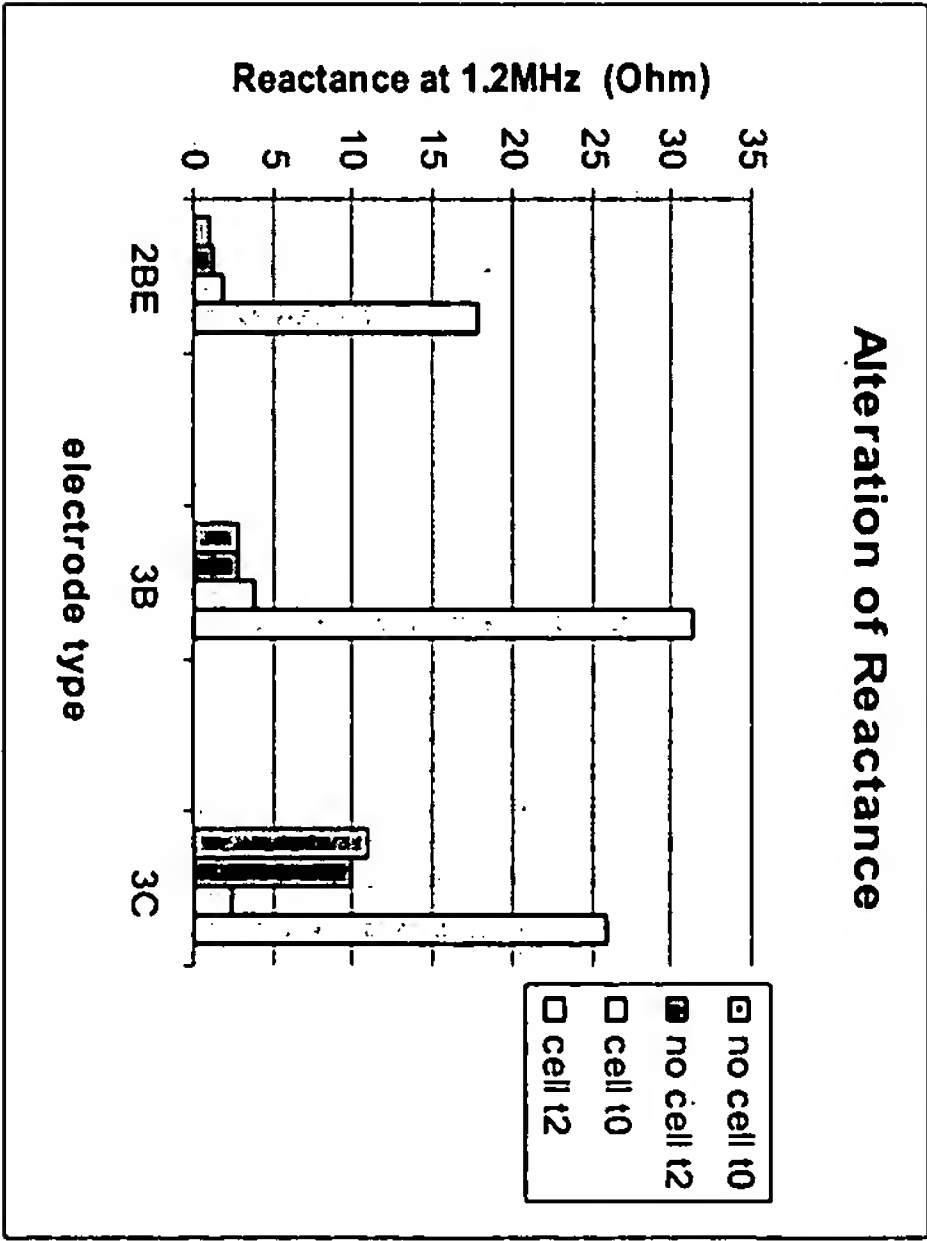
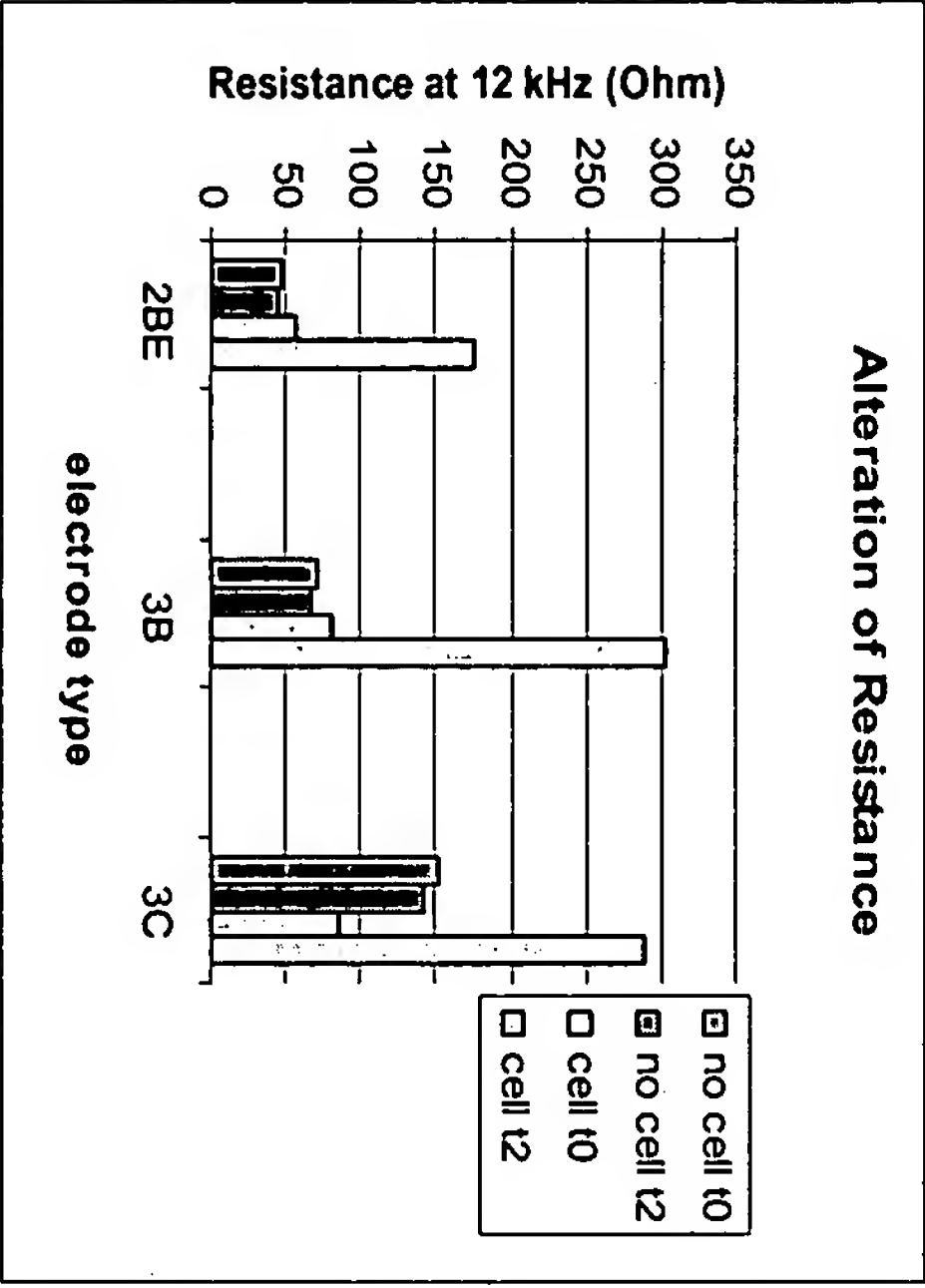
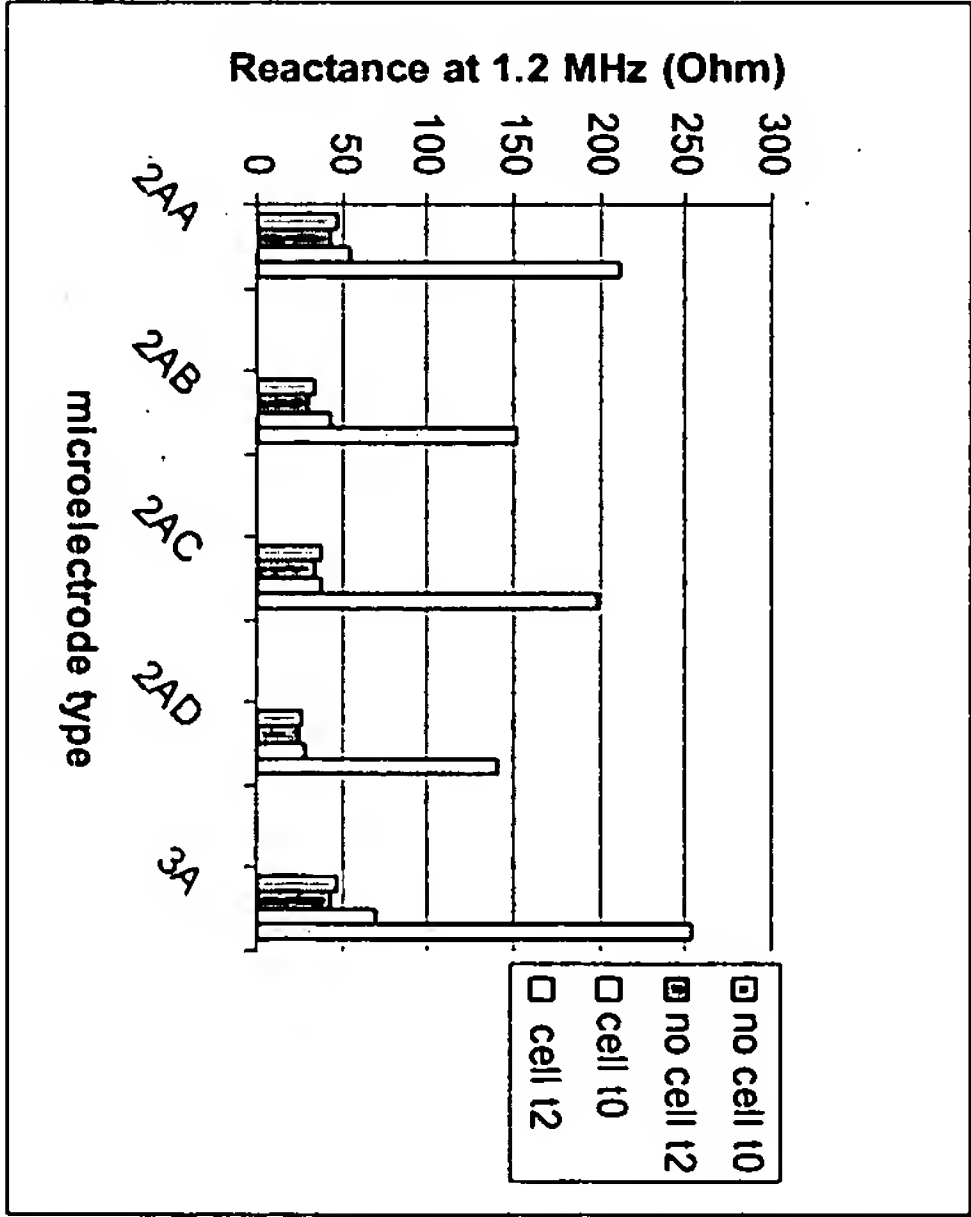
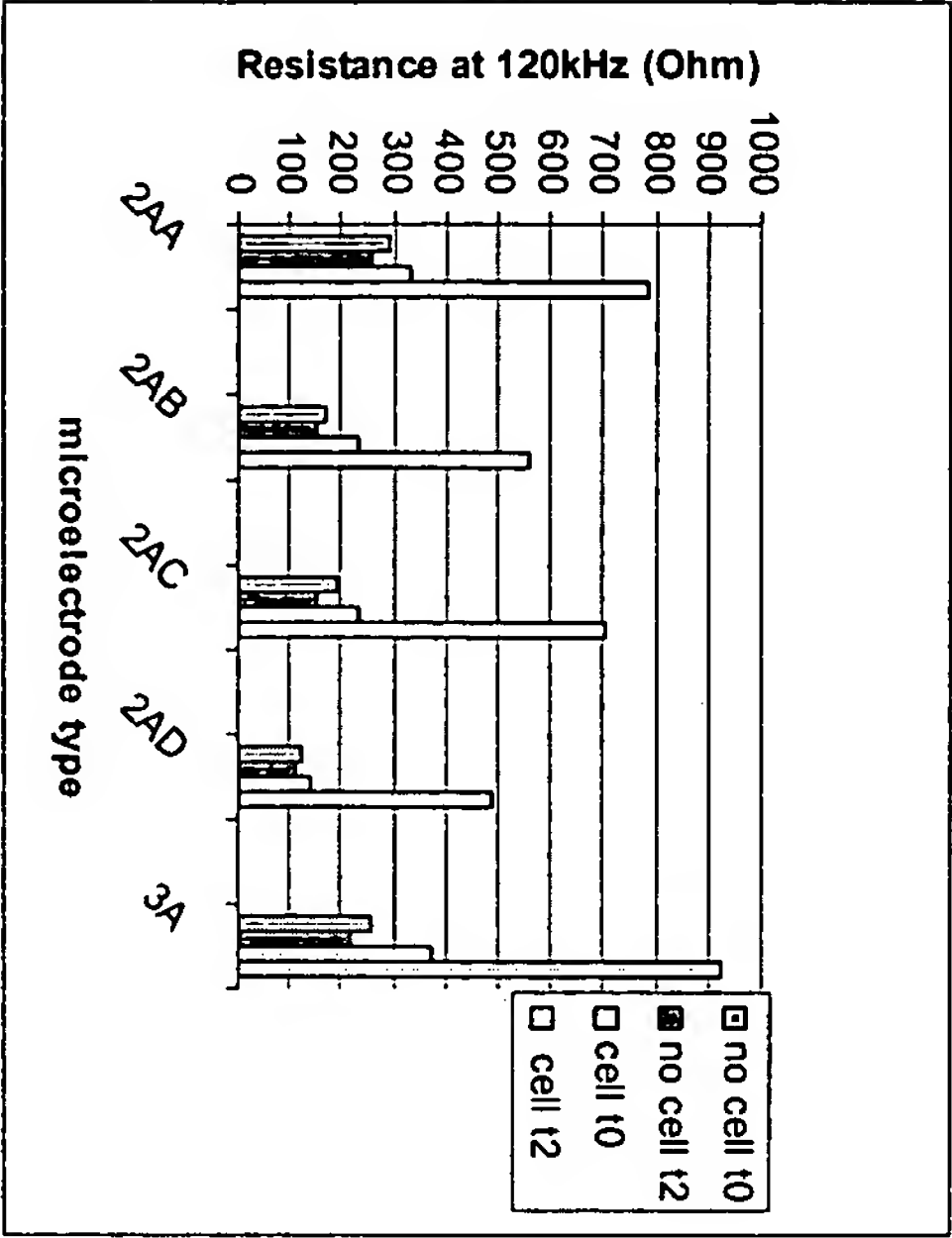


Figure 27

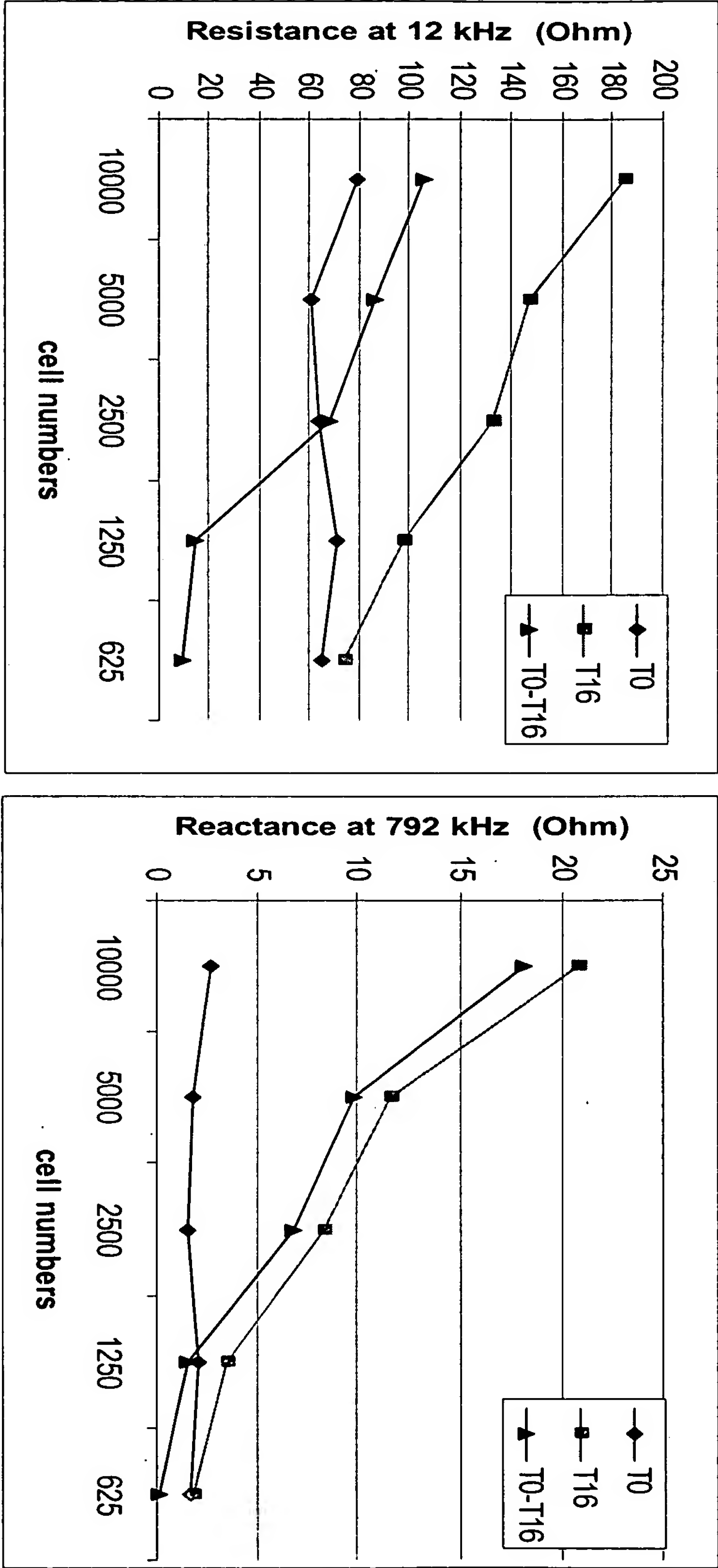


Figure 28

NIH 3T3 and PAE Cell Proliferation

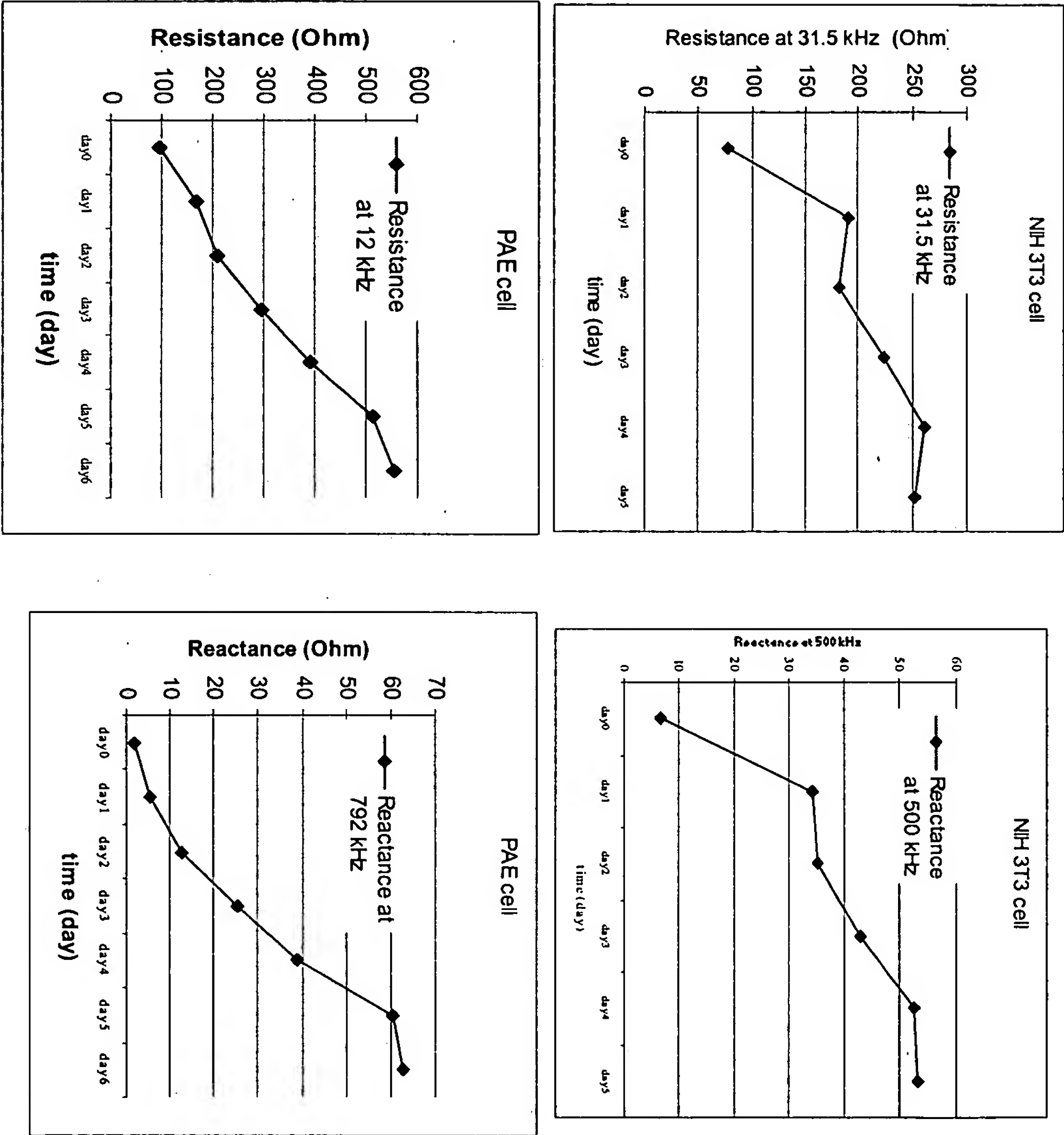


Figure 29

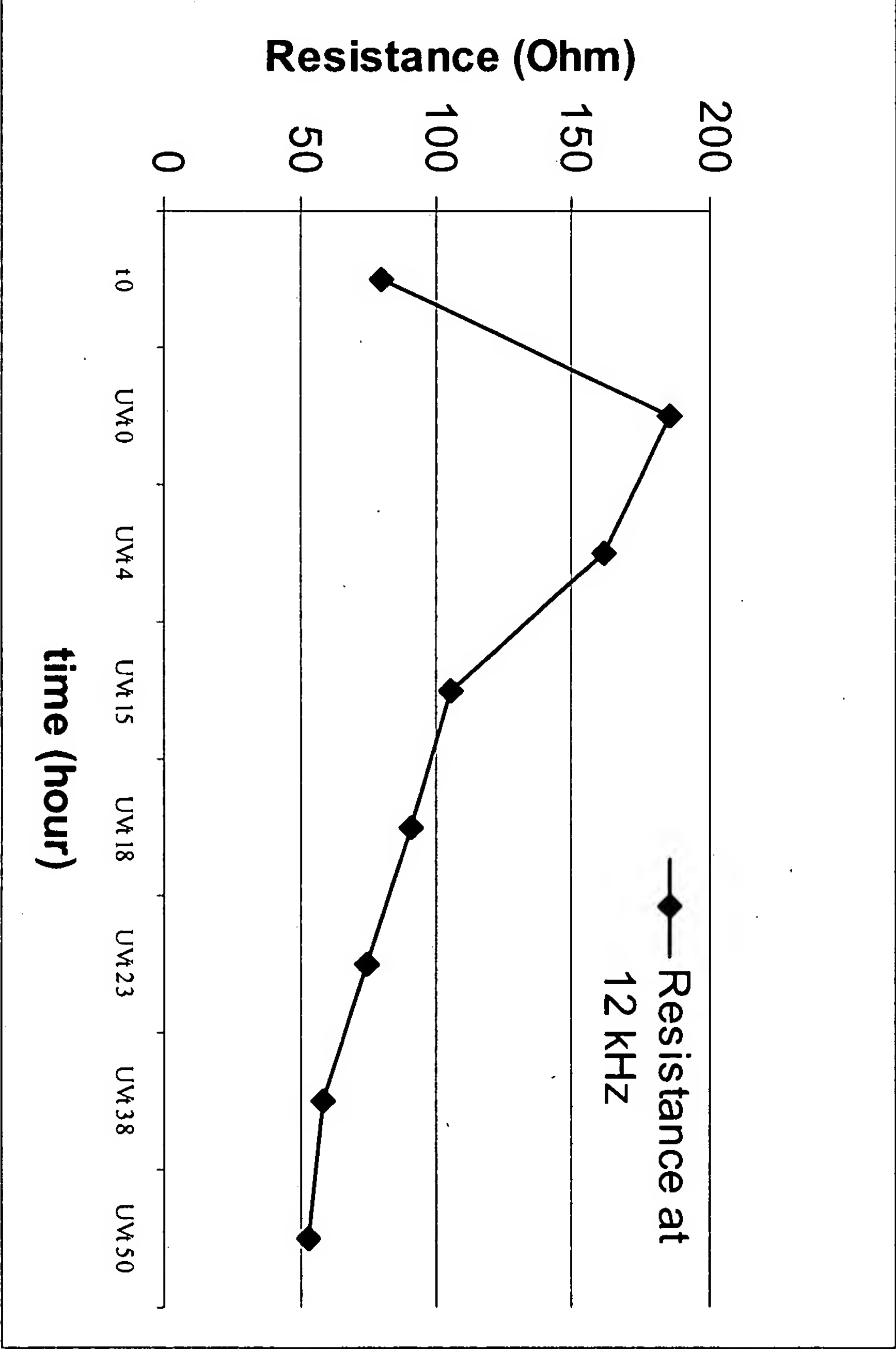


Figure 30

**Tamoxifen IC₅₀s at different time intervals
(NIH 3T3 Cell line)**

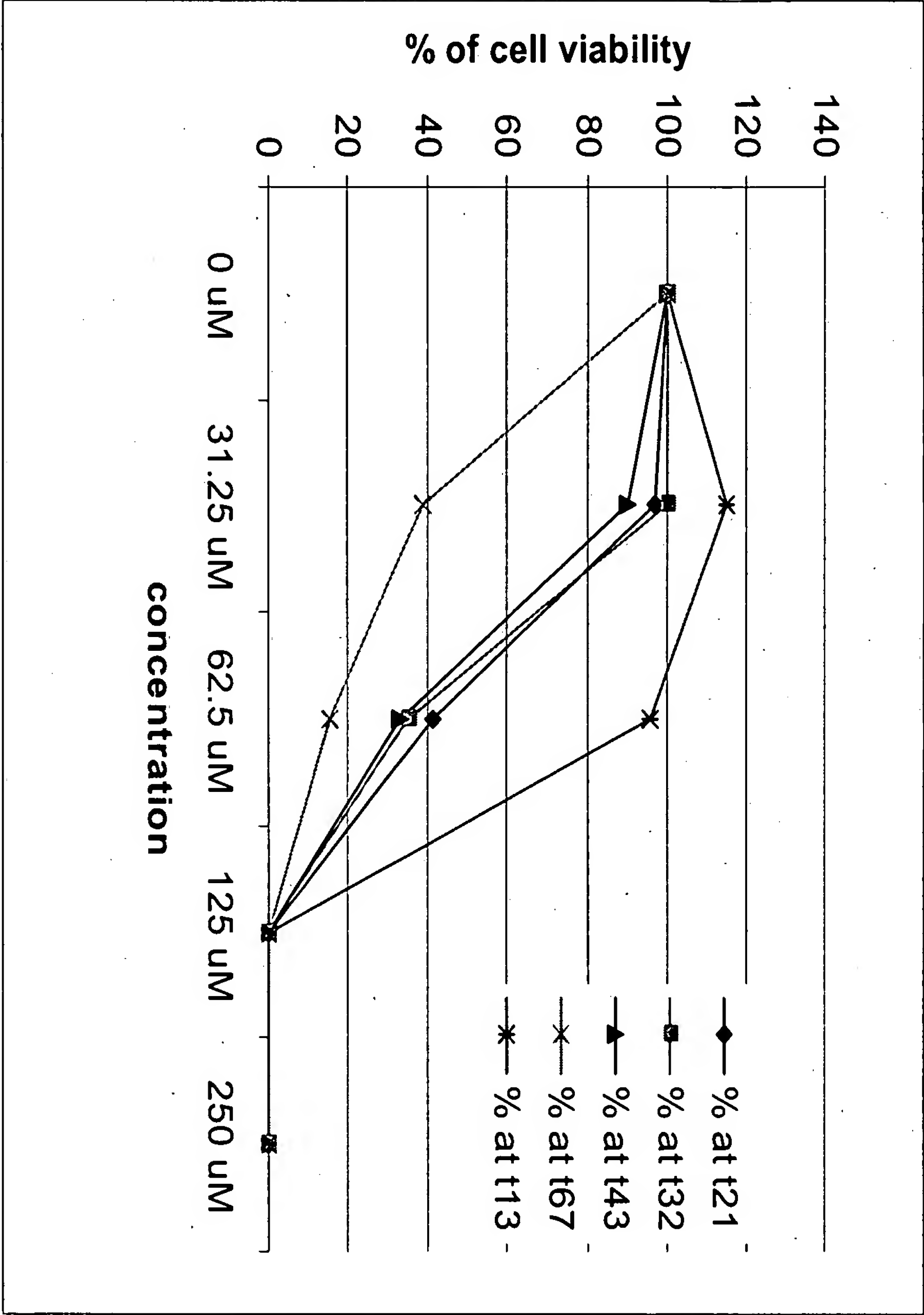


Figure 31

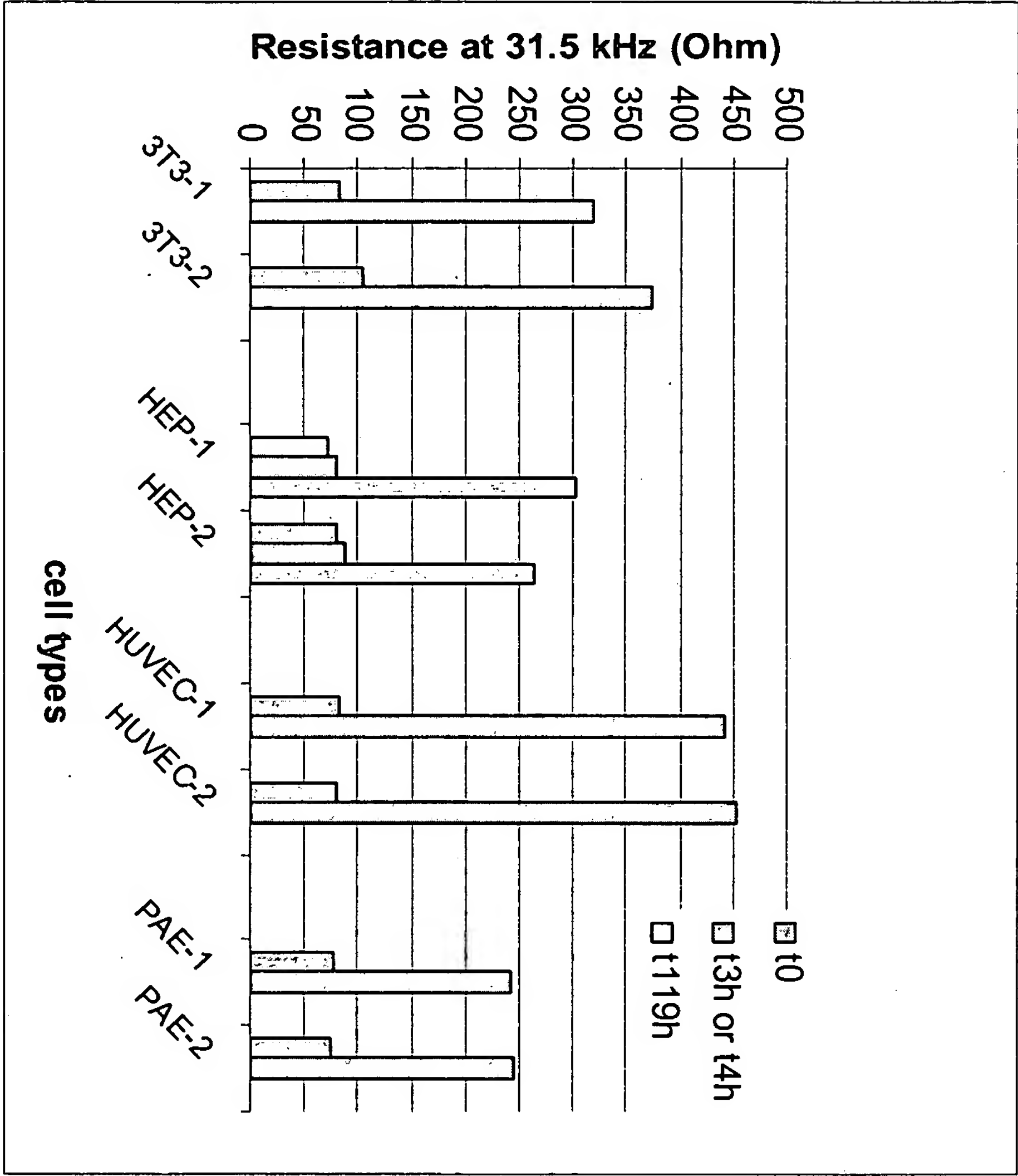


Figure 32

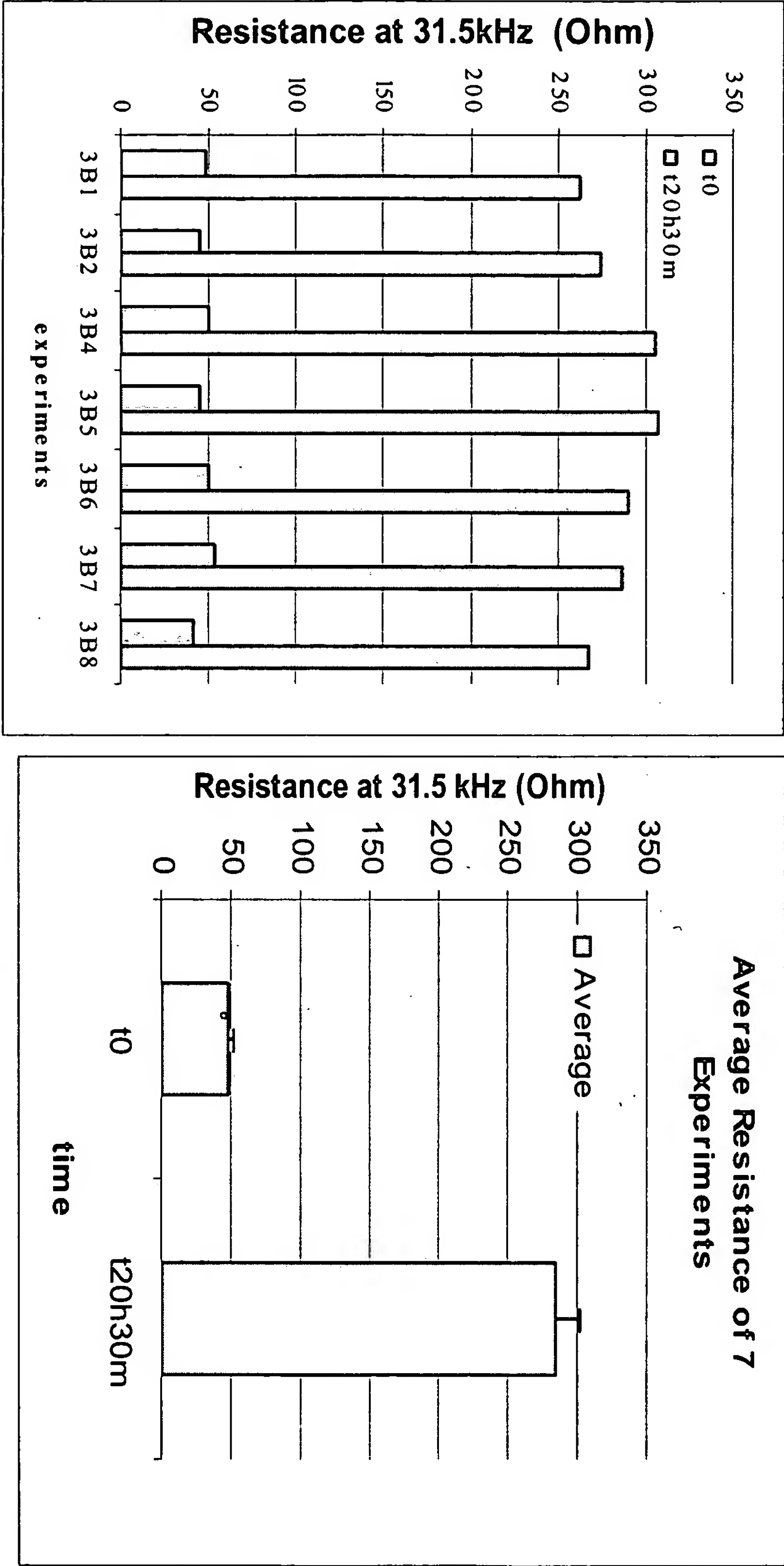


Figure 33.

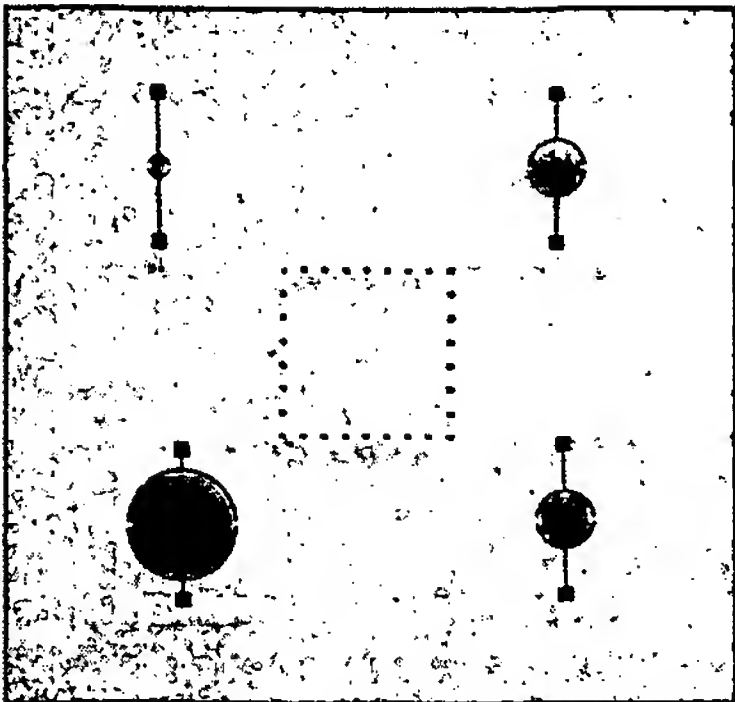


Figure 34.

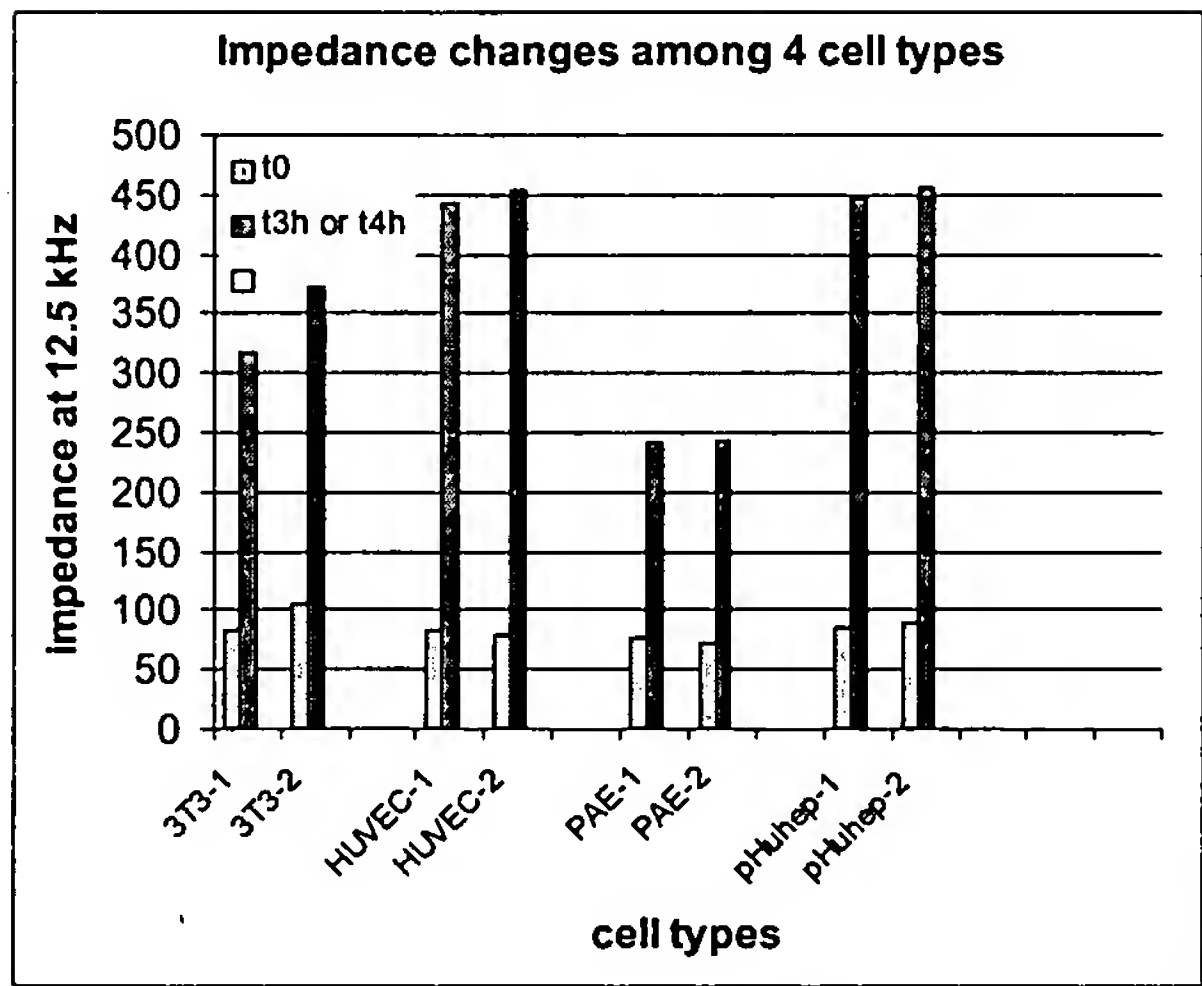


Figure 35.

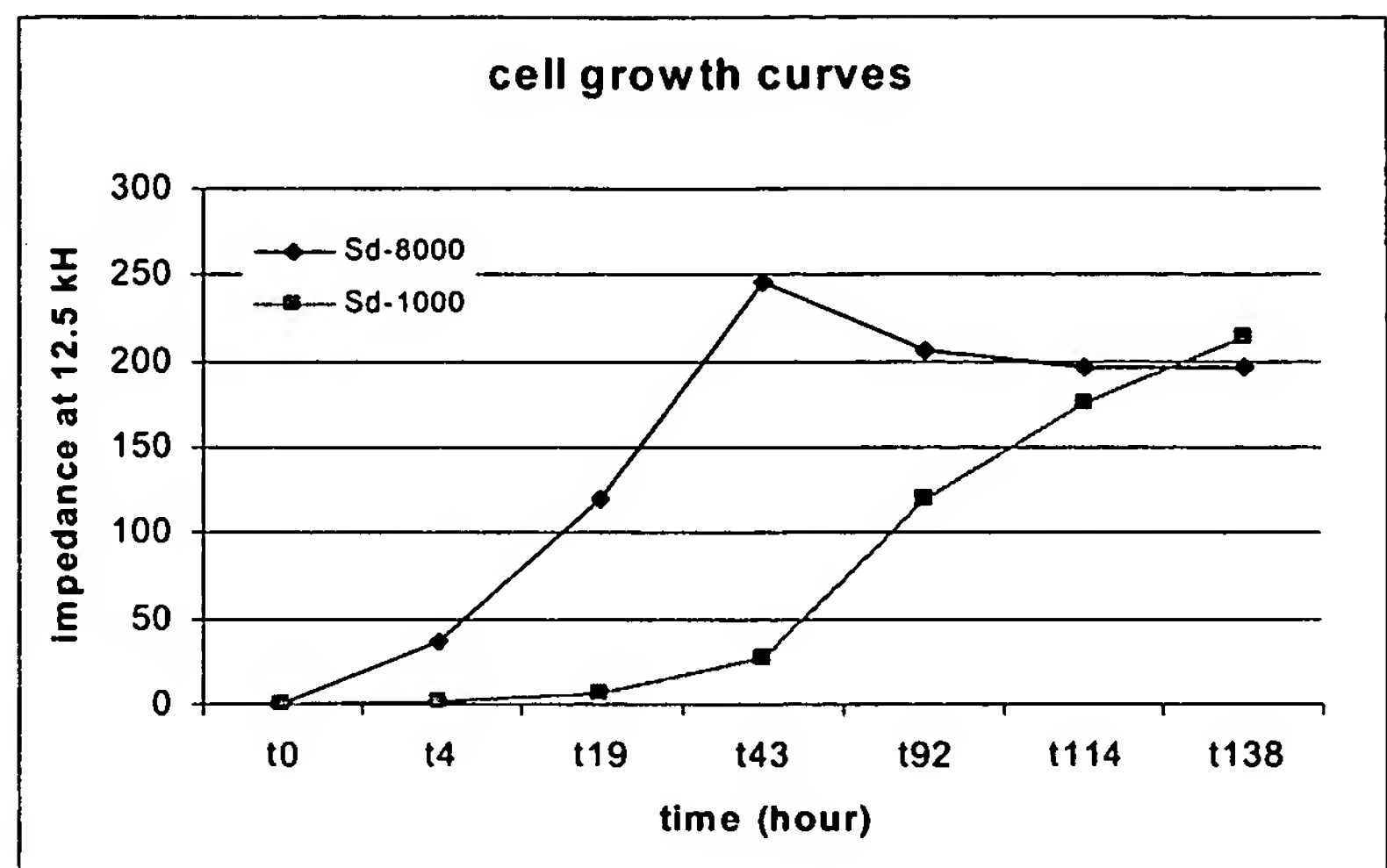


Figure 36.

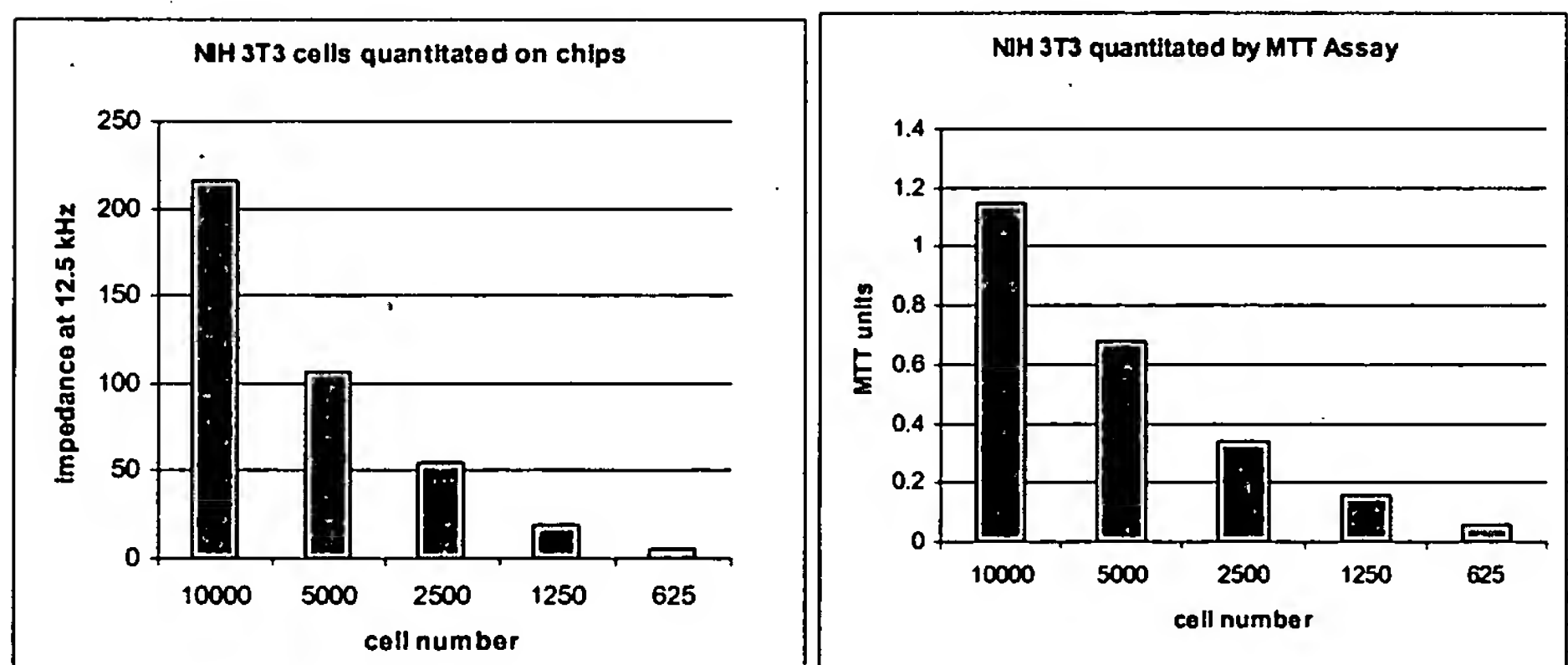


Figure 37.

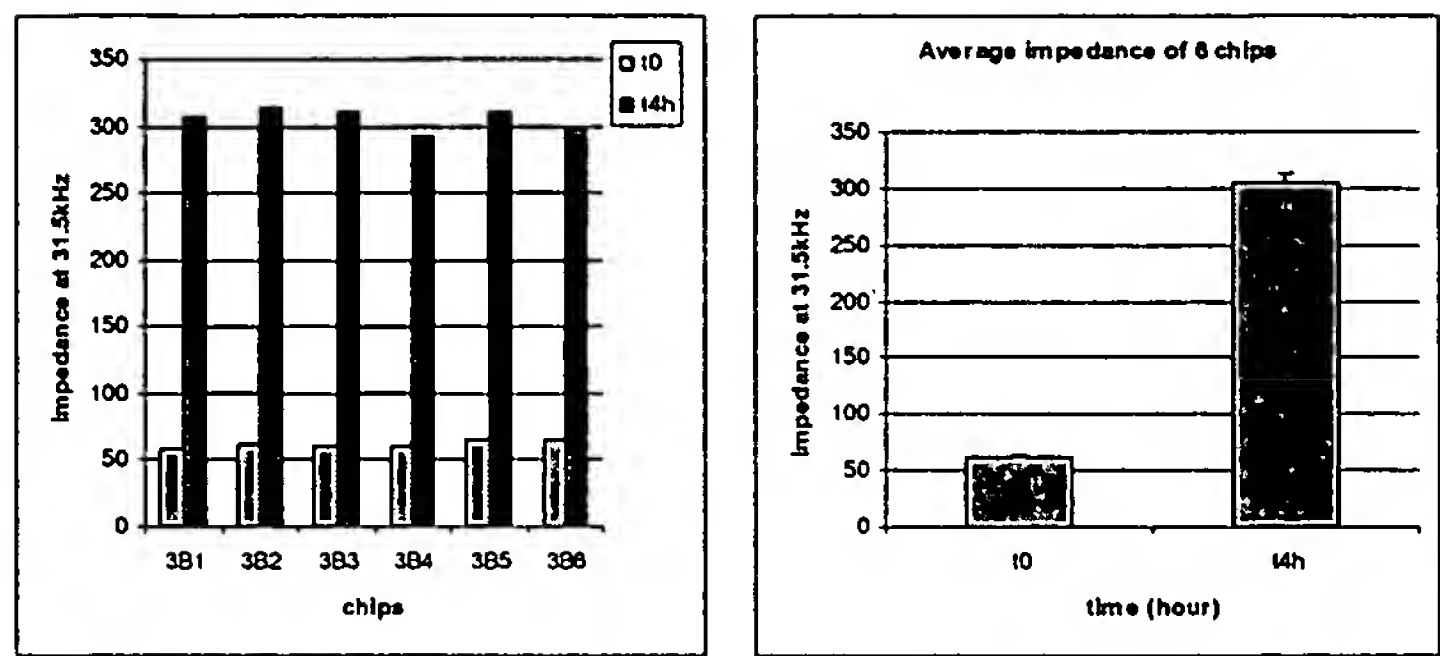


Figure 38(A).

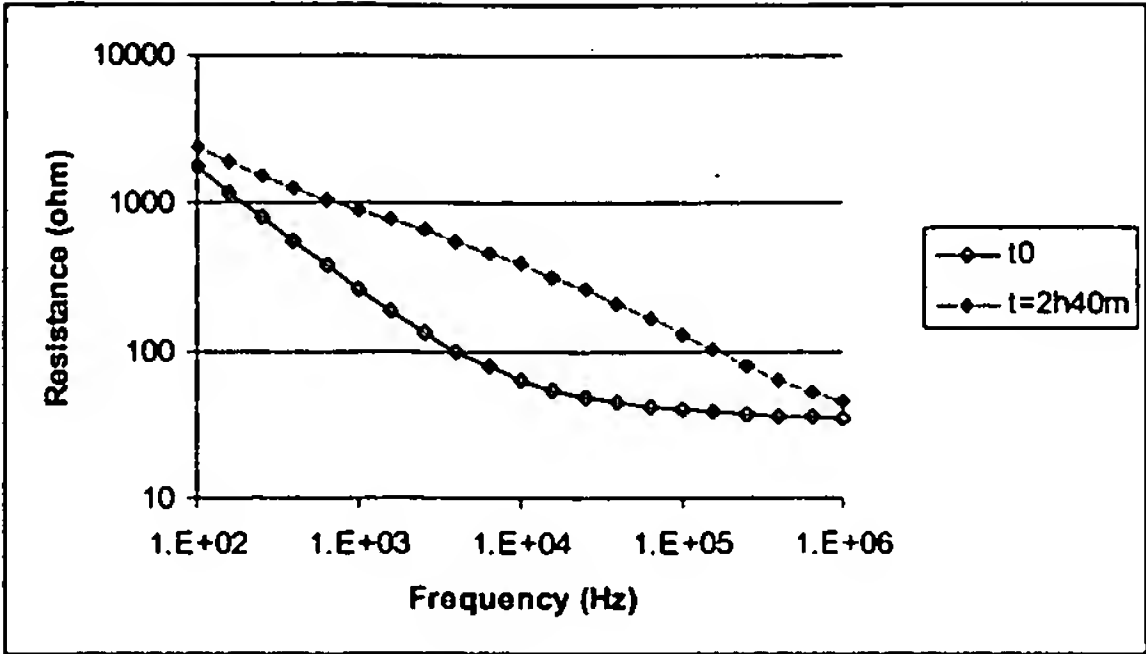


Figure 38(B)

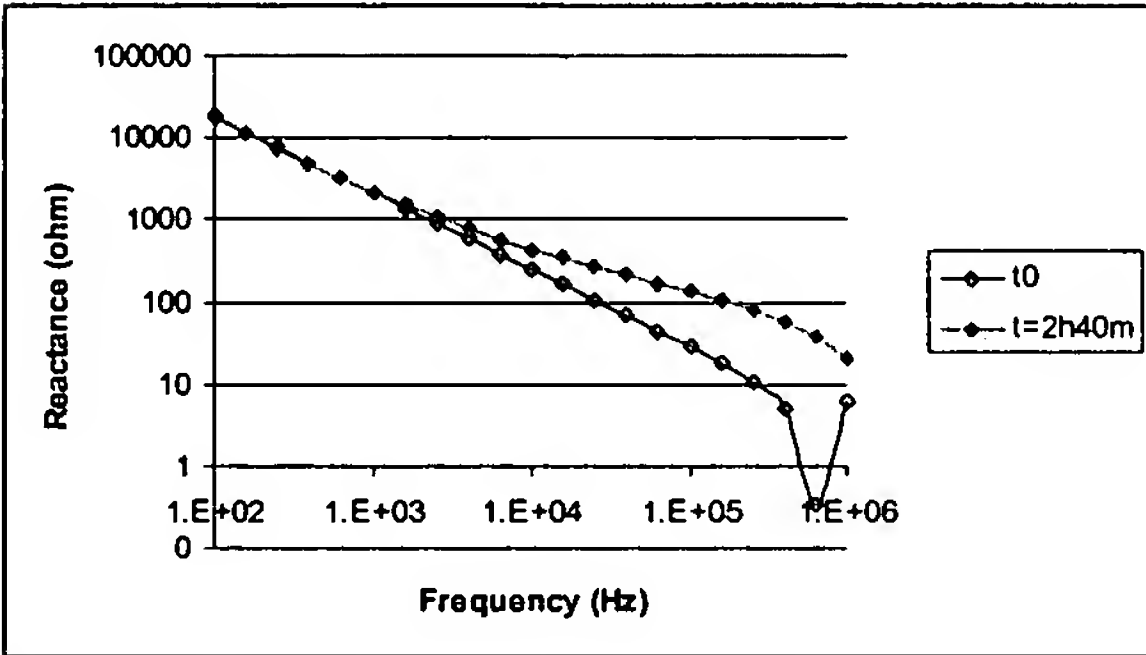


Figure 38(C)

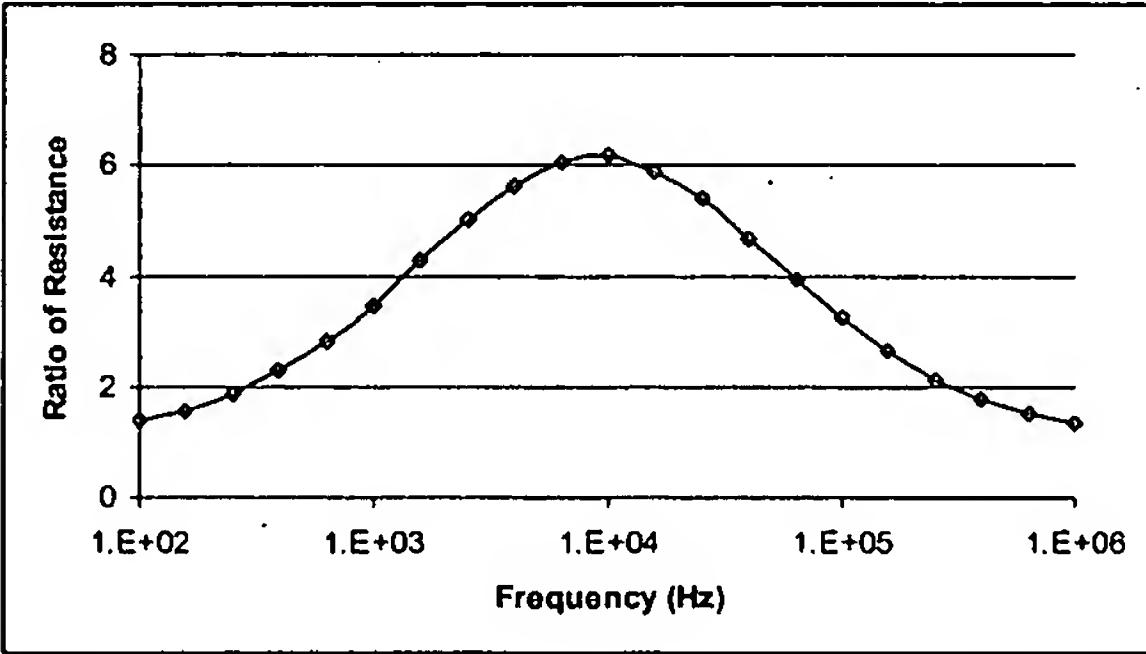


Figure 38(D)

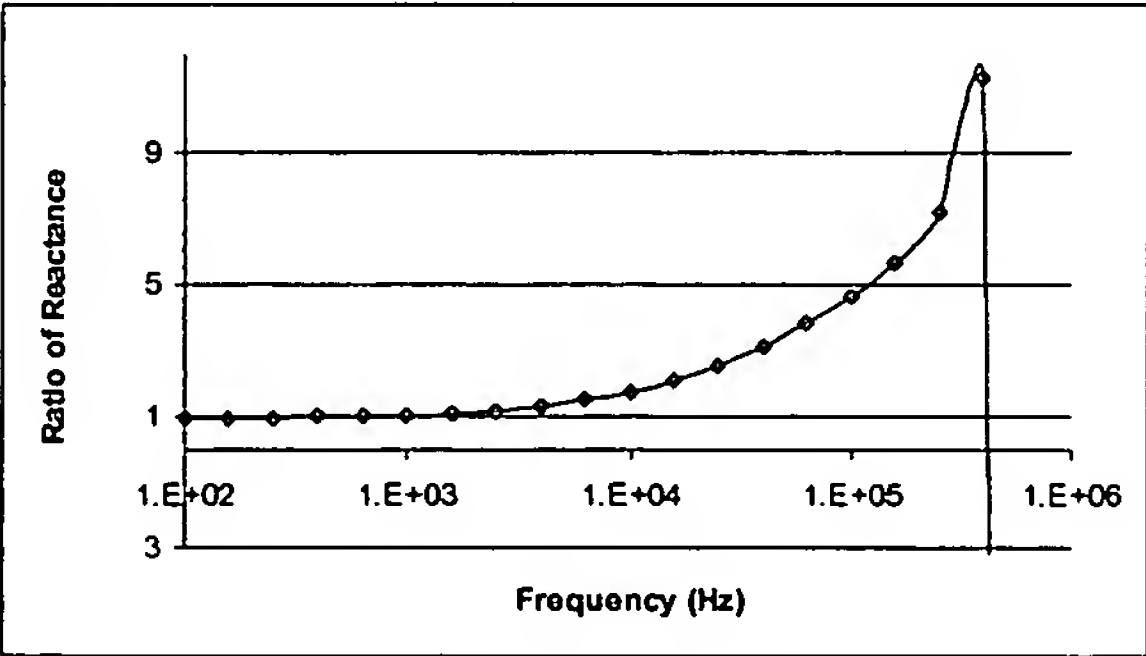


Figure 39(A)

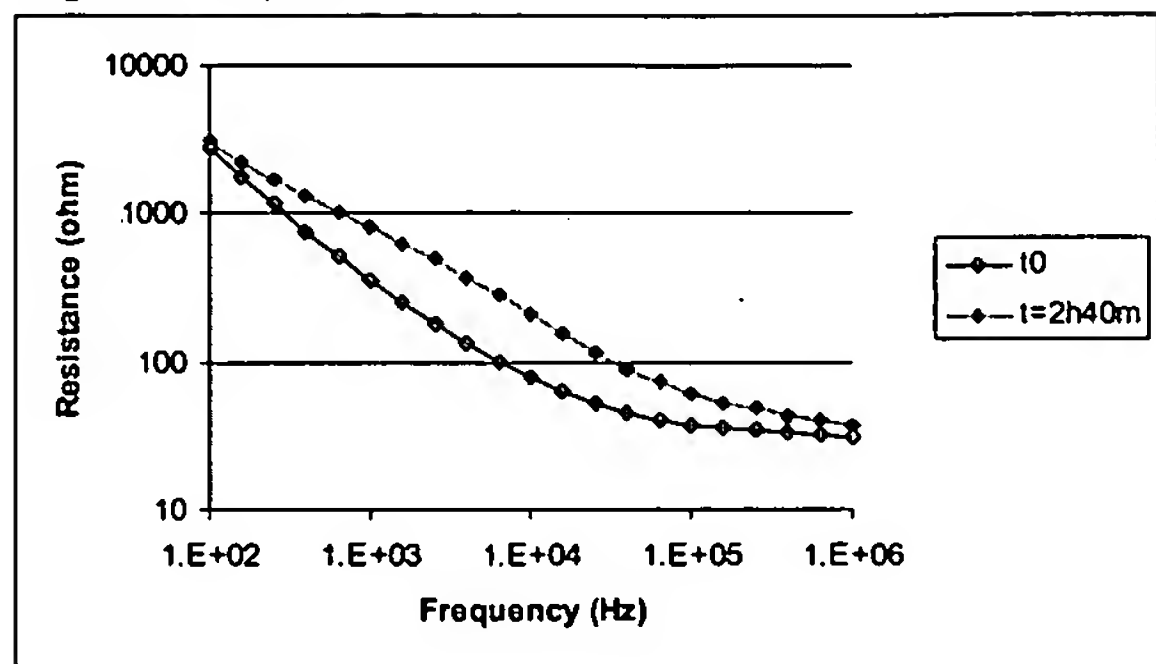


Figure 39(B)

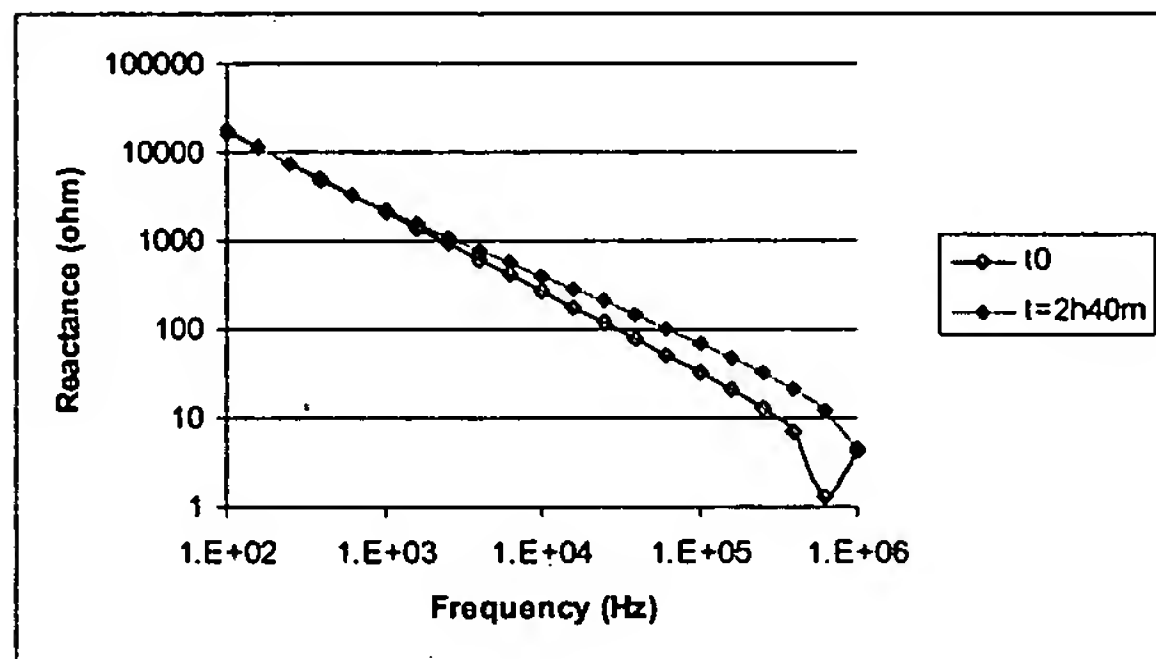


Figure 39(C)

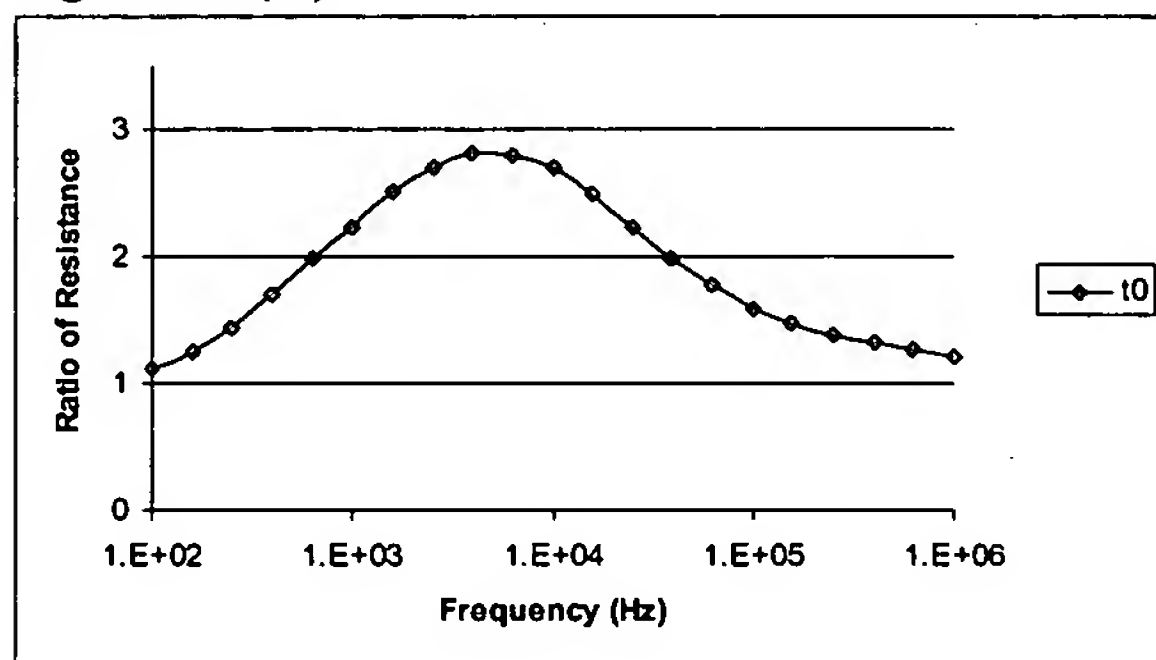


Figure 39(D)

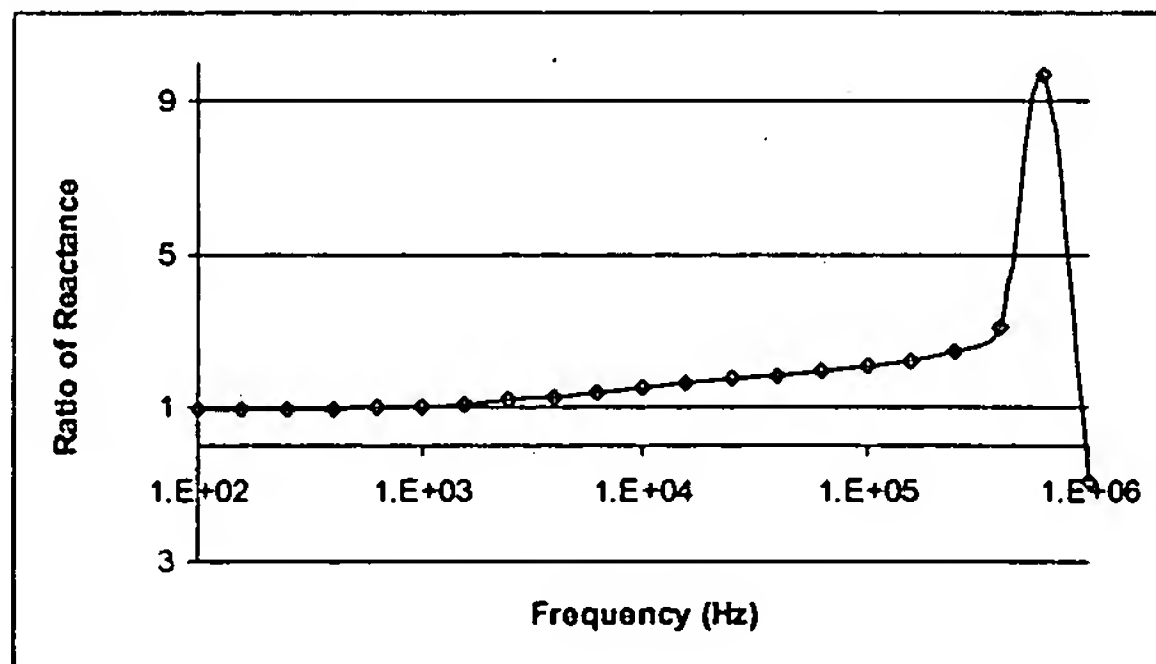


Figure 40(A)

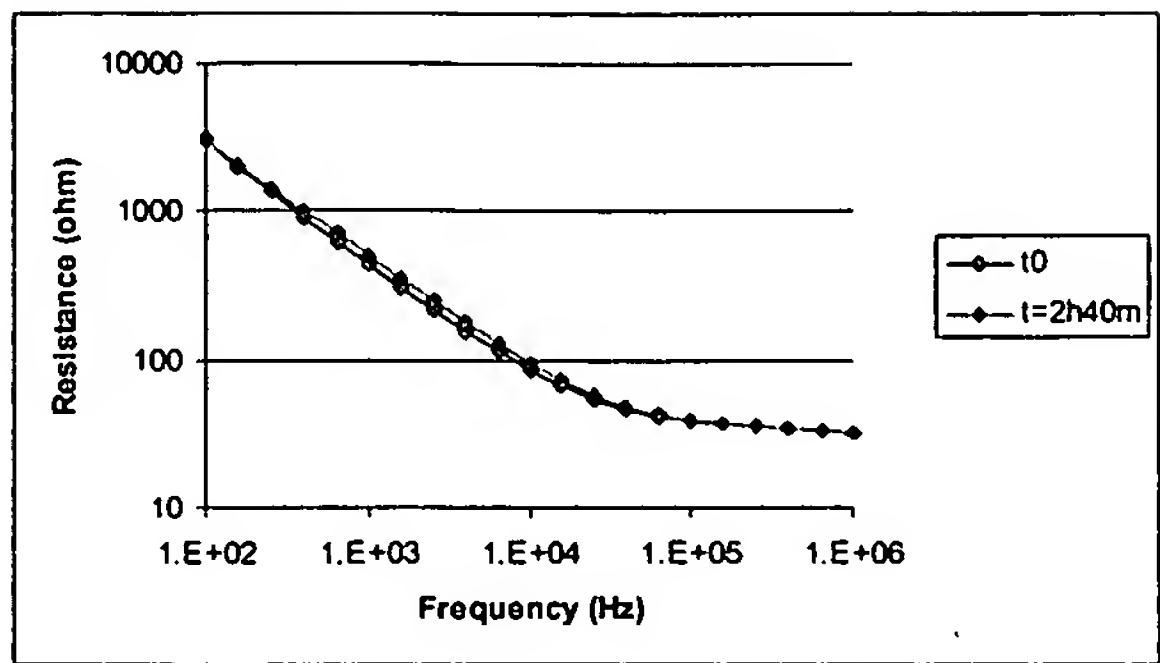


Figure 40(B)

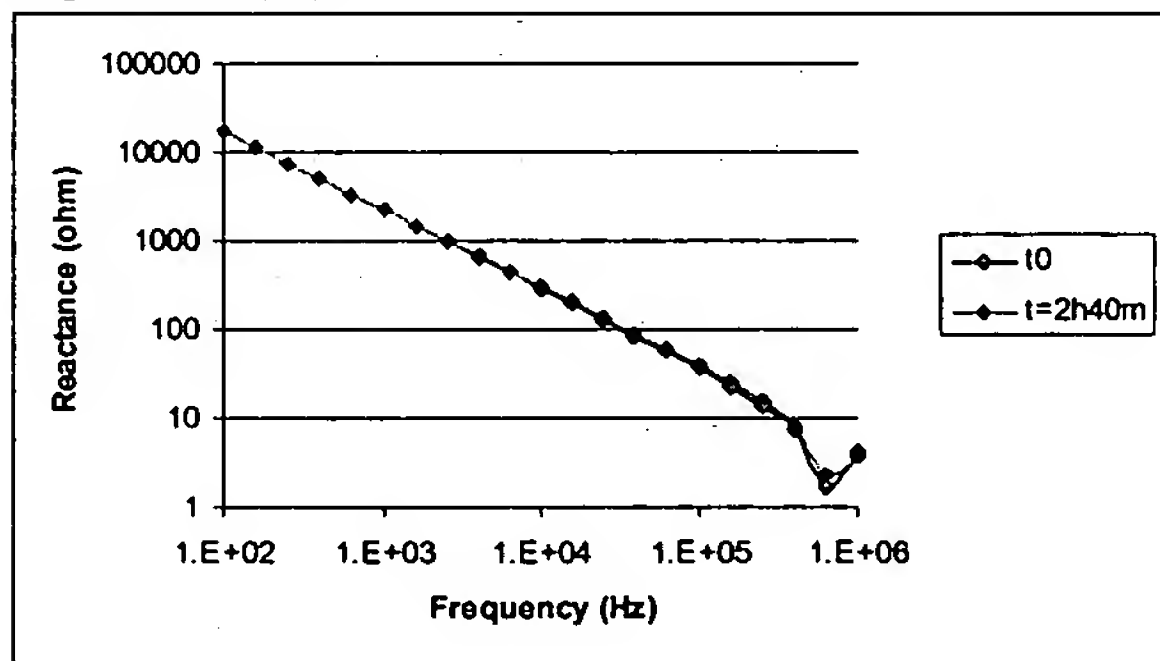


Figure 40(C)

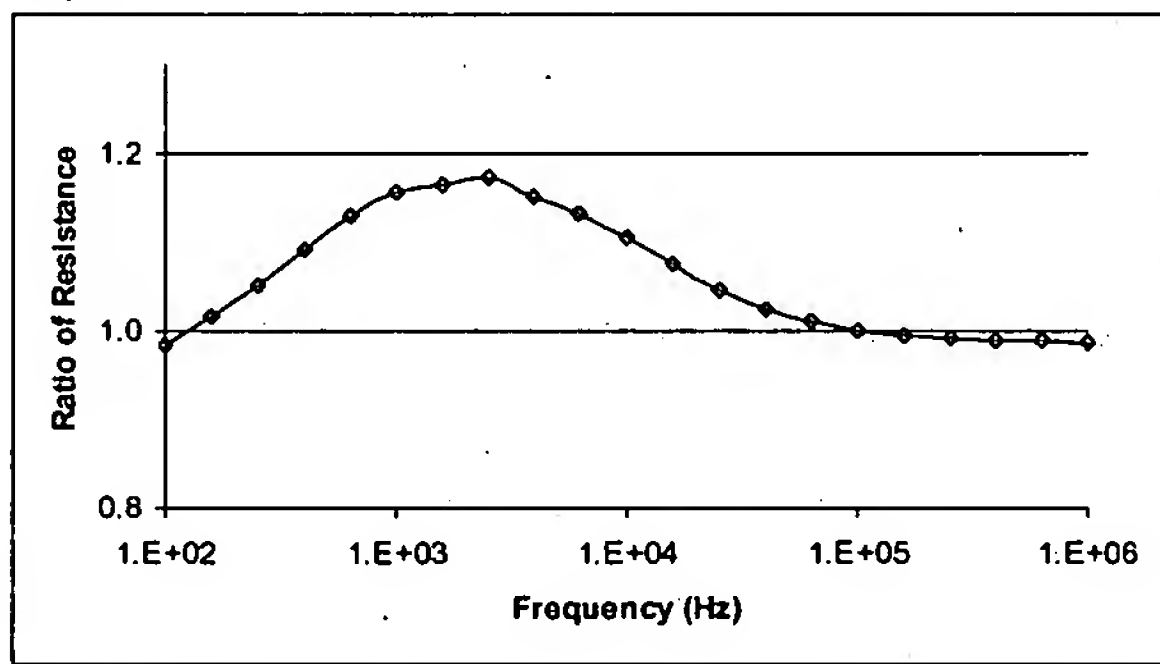


Figure 40(D)

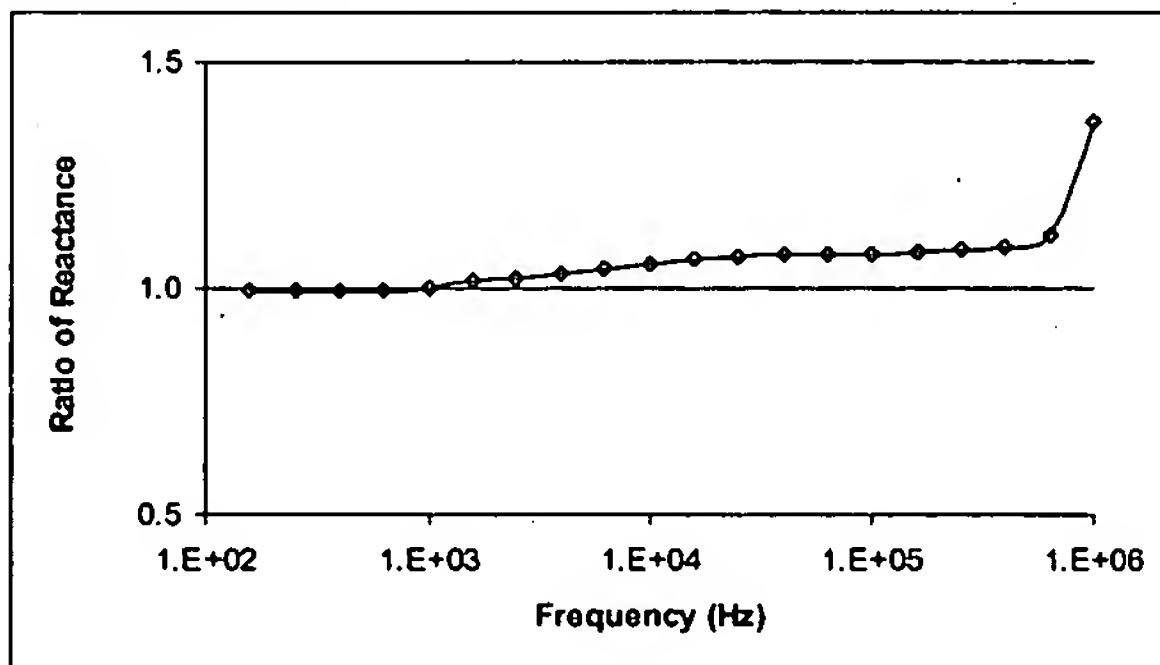


Figure 41(A)

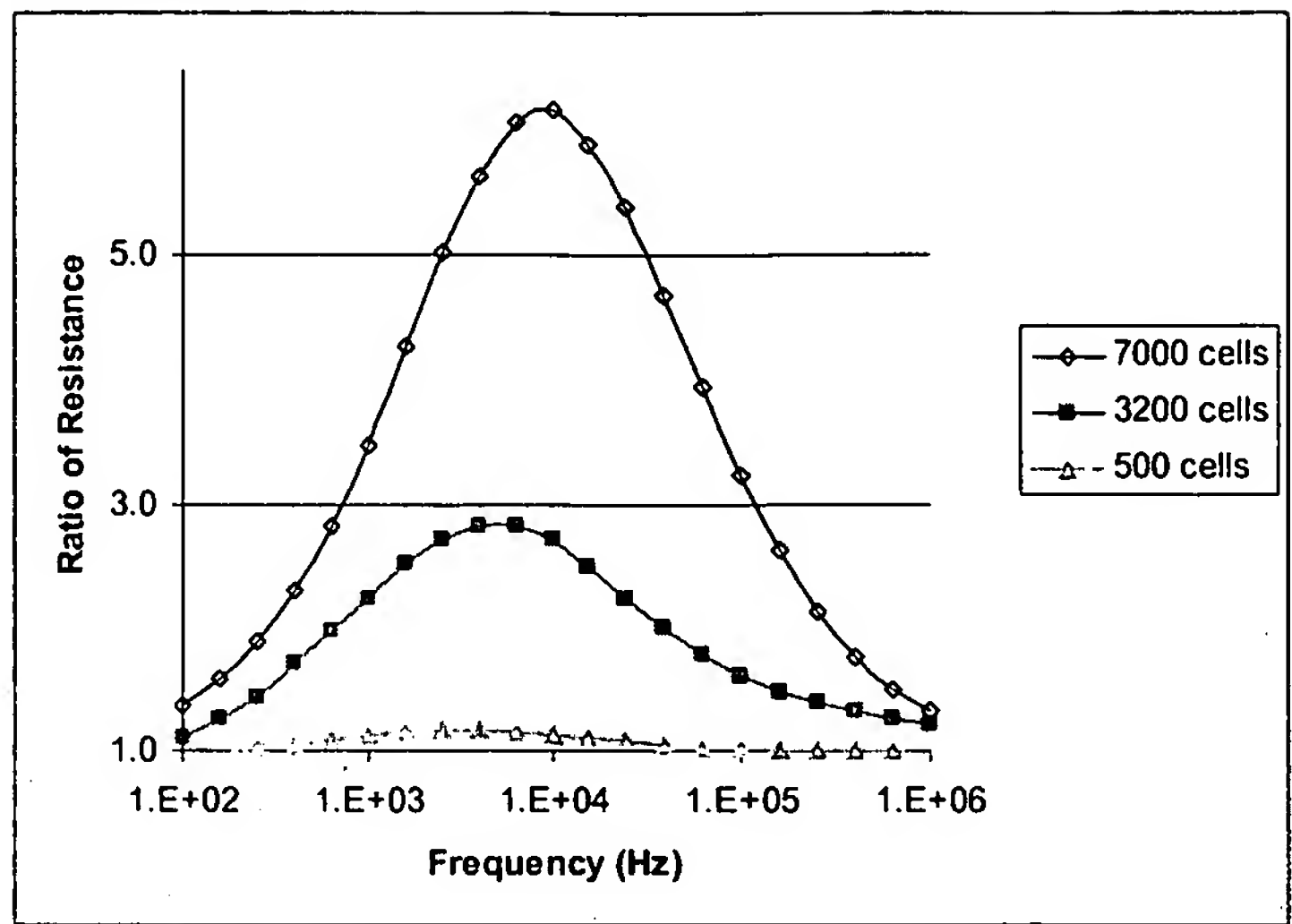


Figure 41(B)

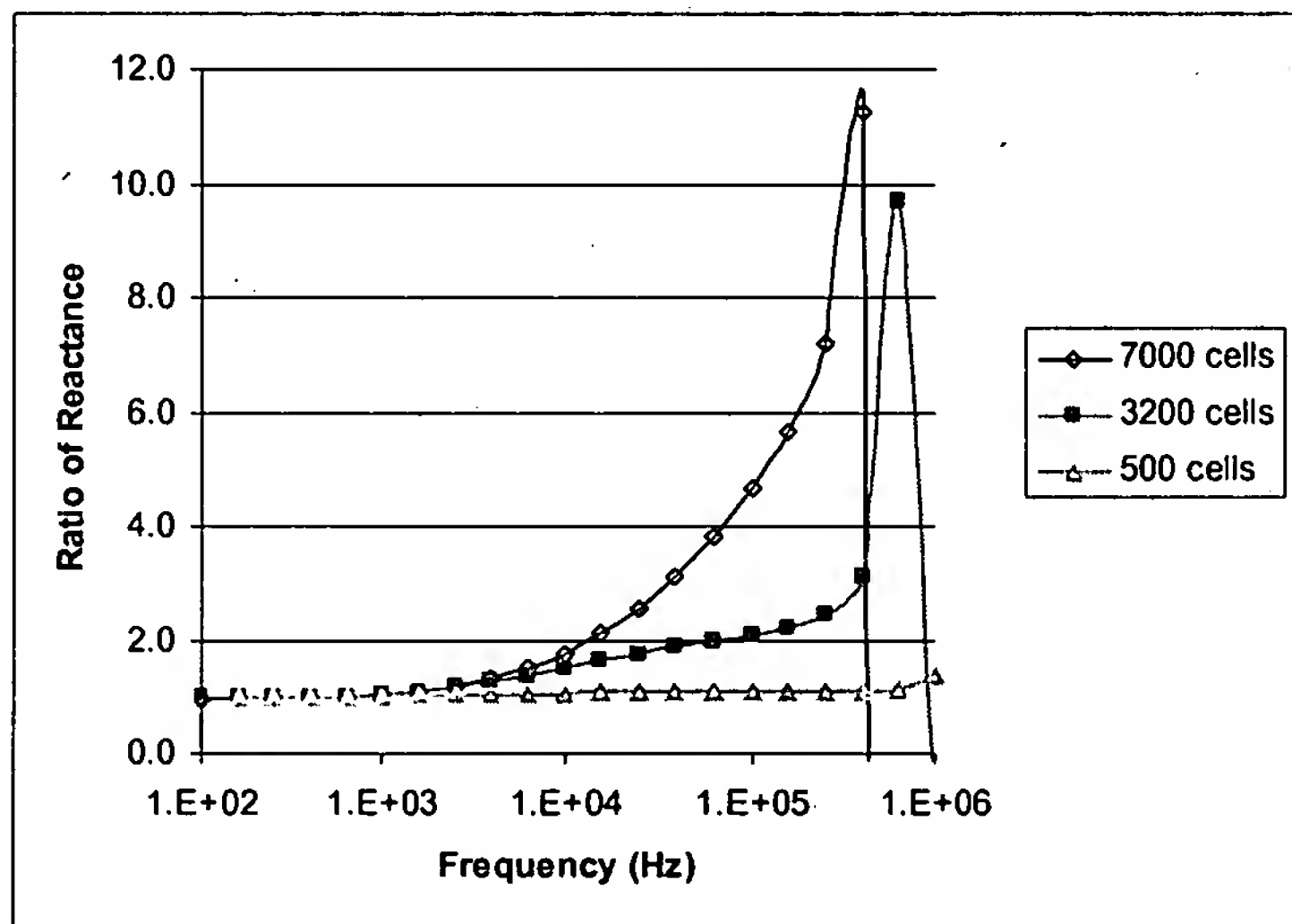
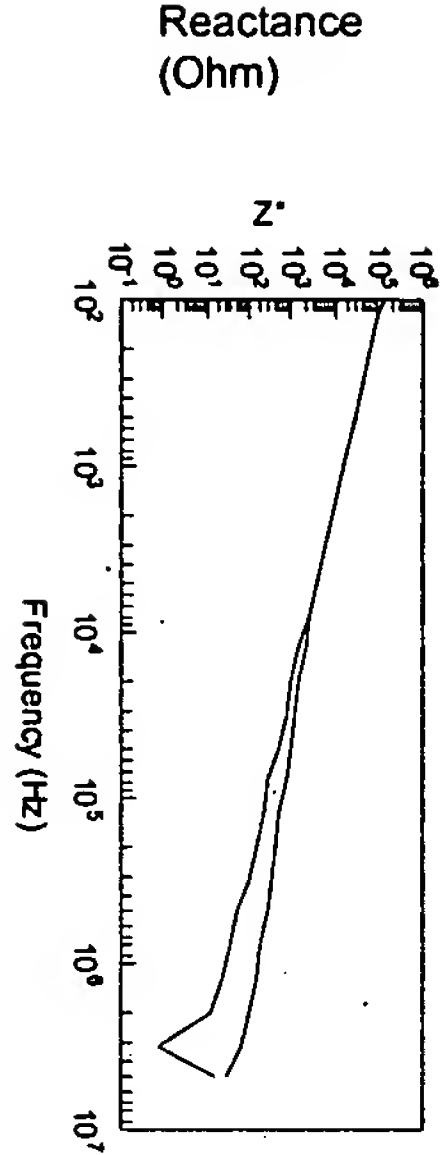
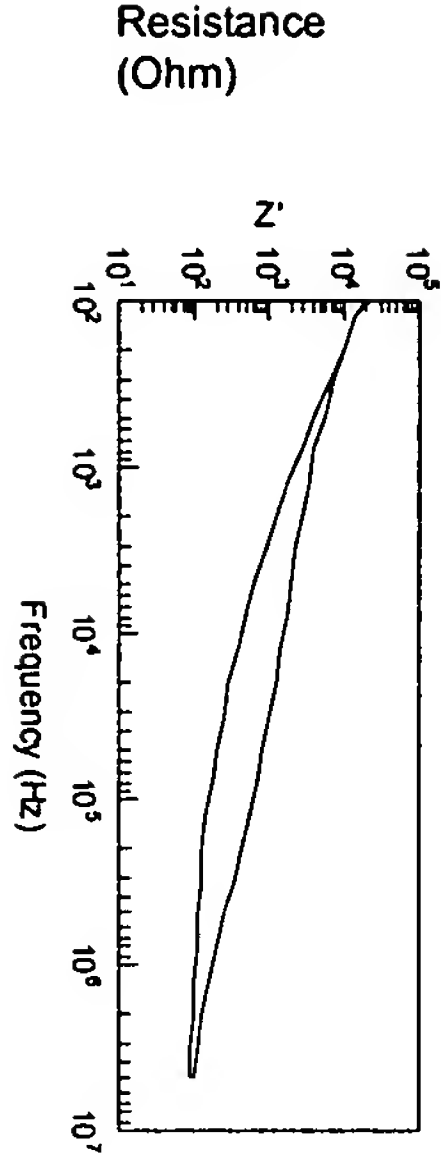
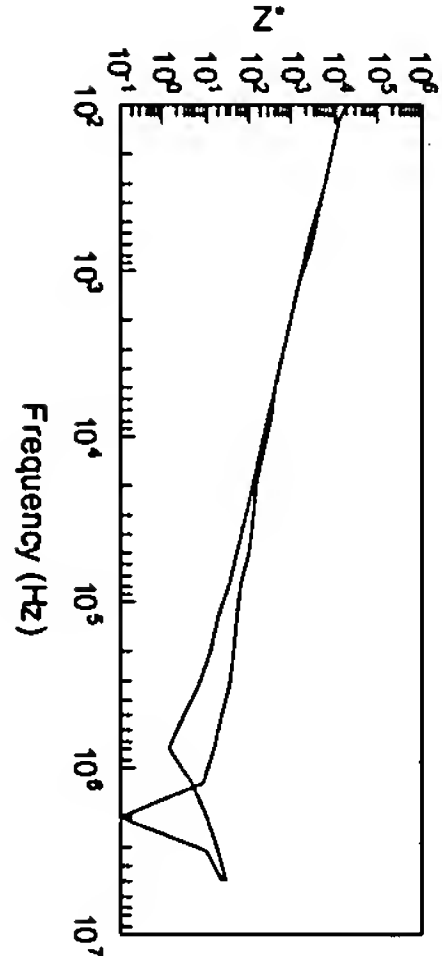
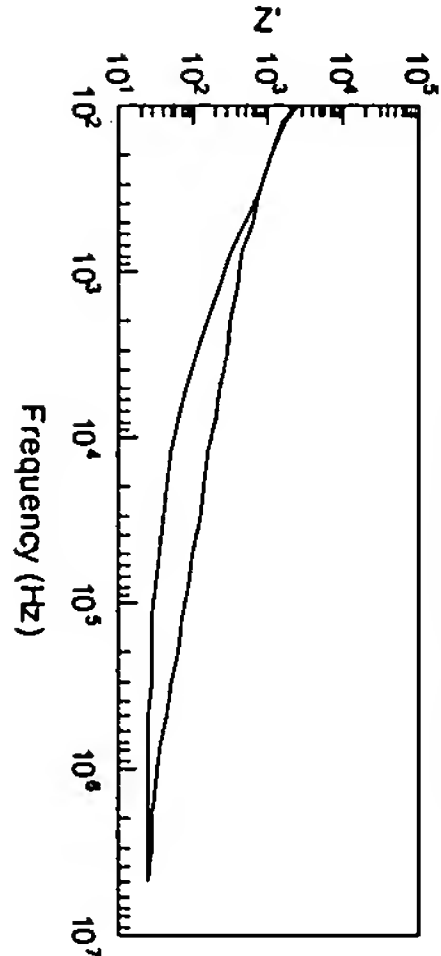


Figure 42 A

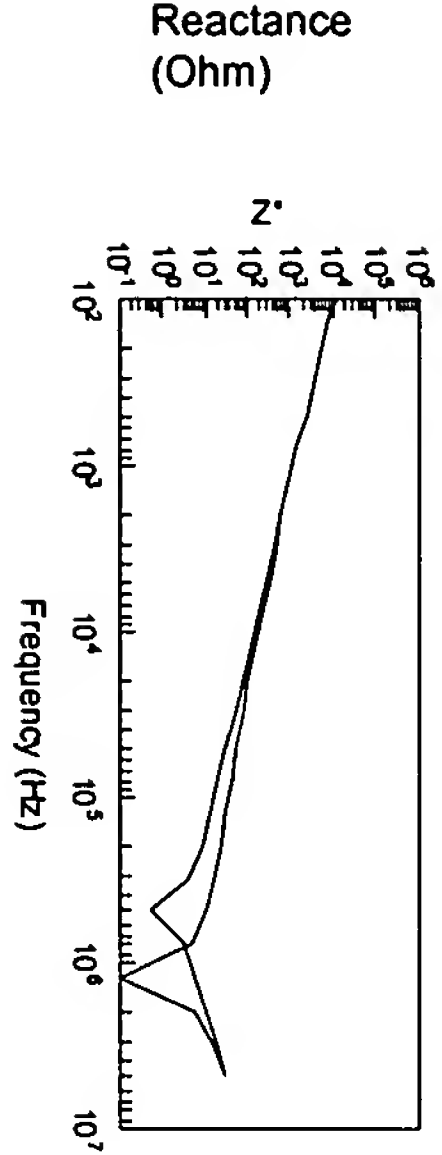
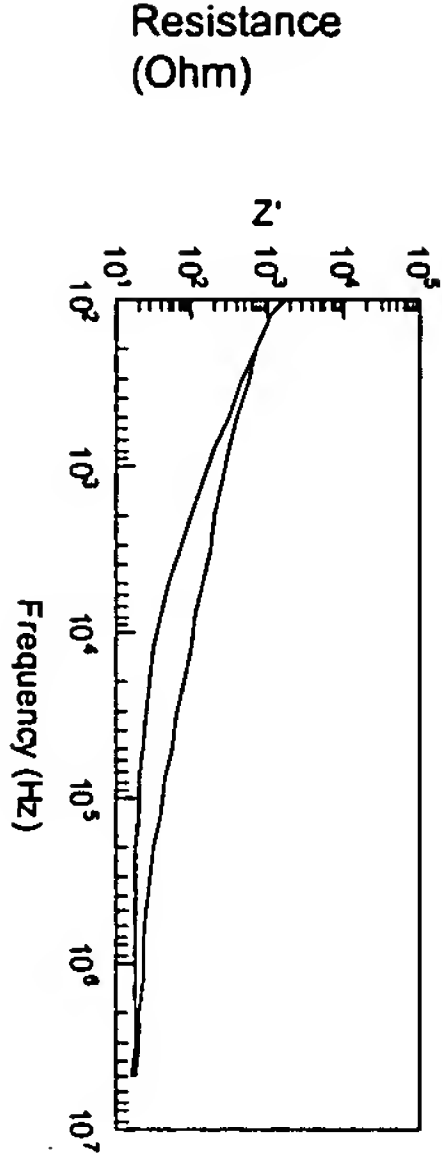
2AD (50 μm :10 μm)



2BE (48 μm : 18 μm)



2CF (48 μm :28 μm)



50 μm : 50 μm

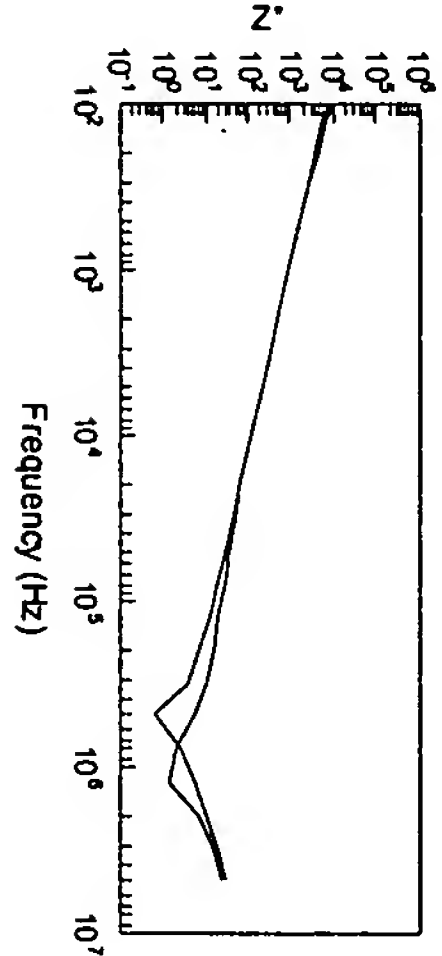
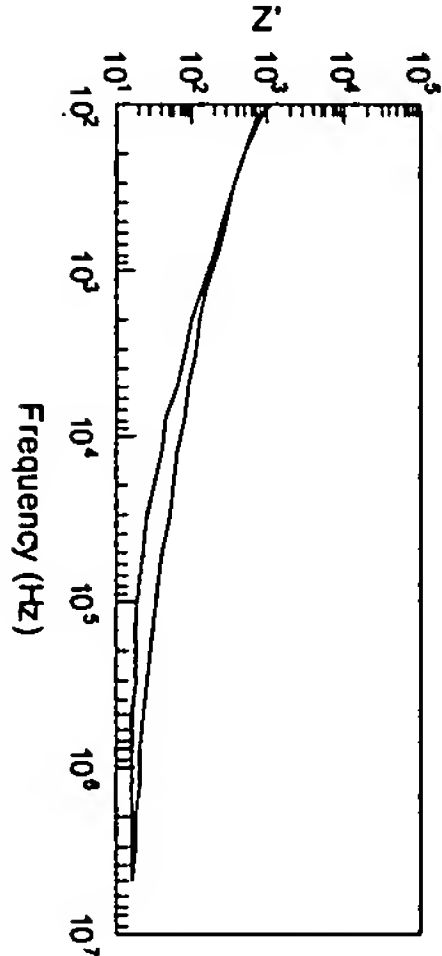


Figure 42 B

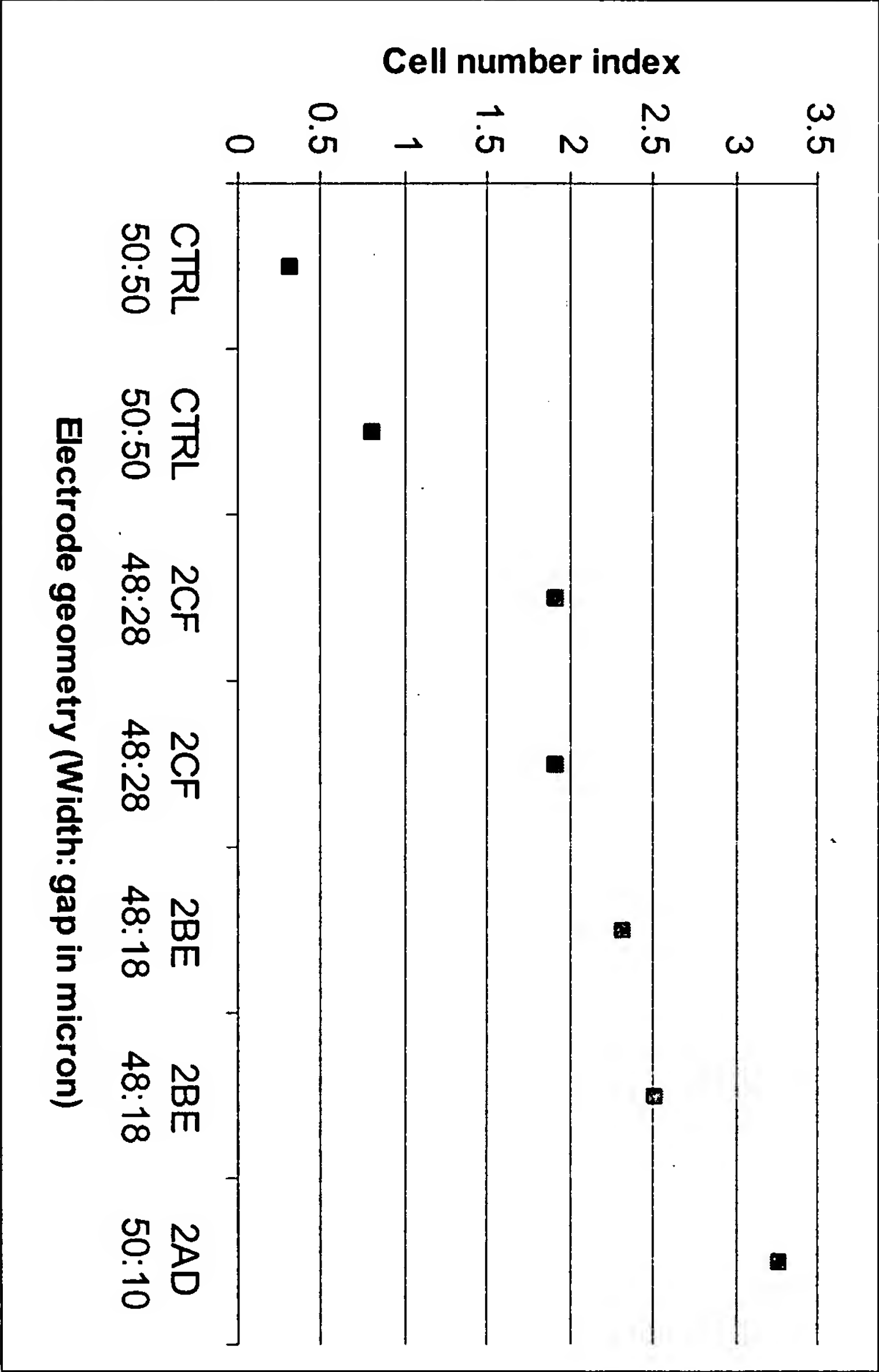


Figure 43

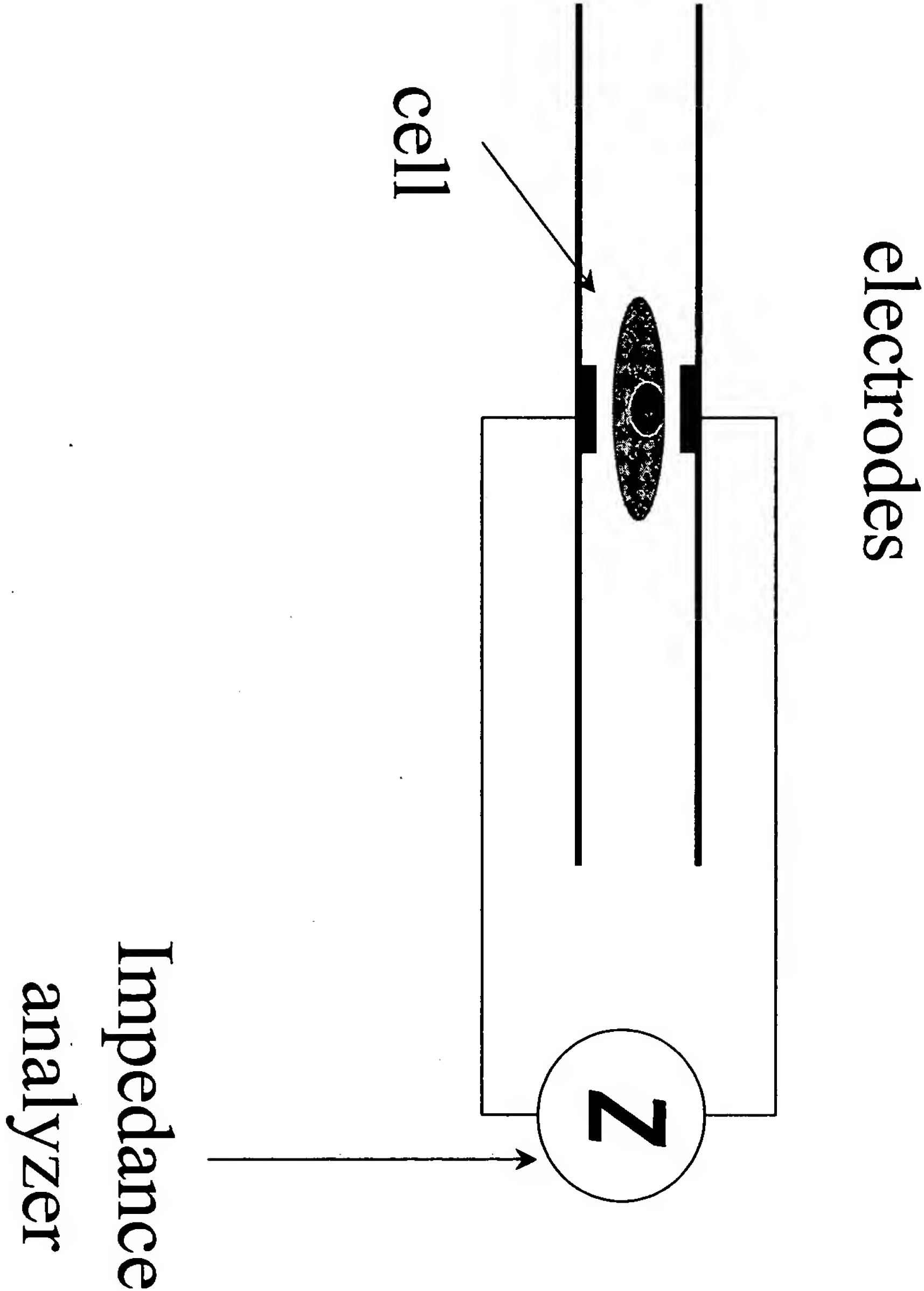


Figure 44

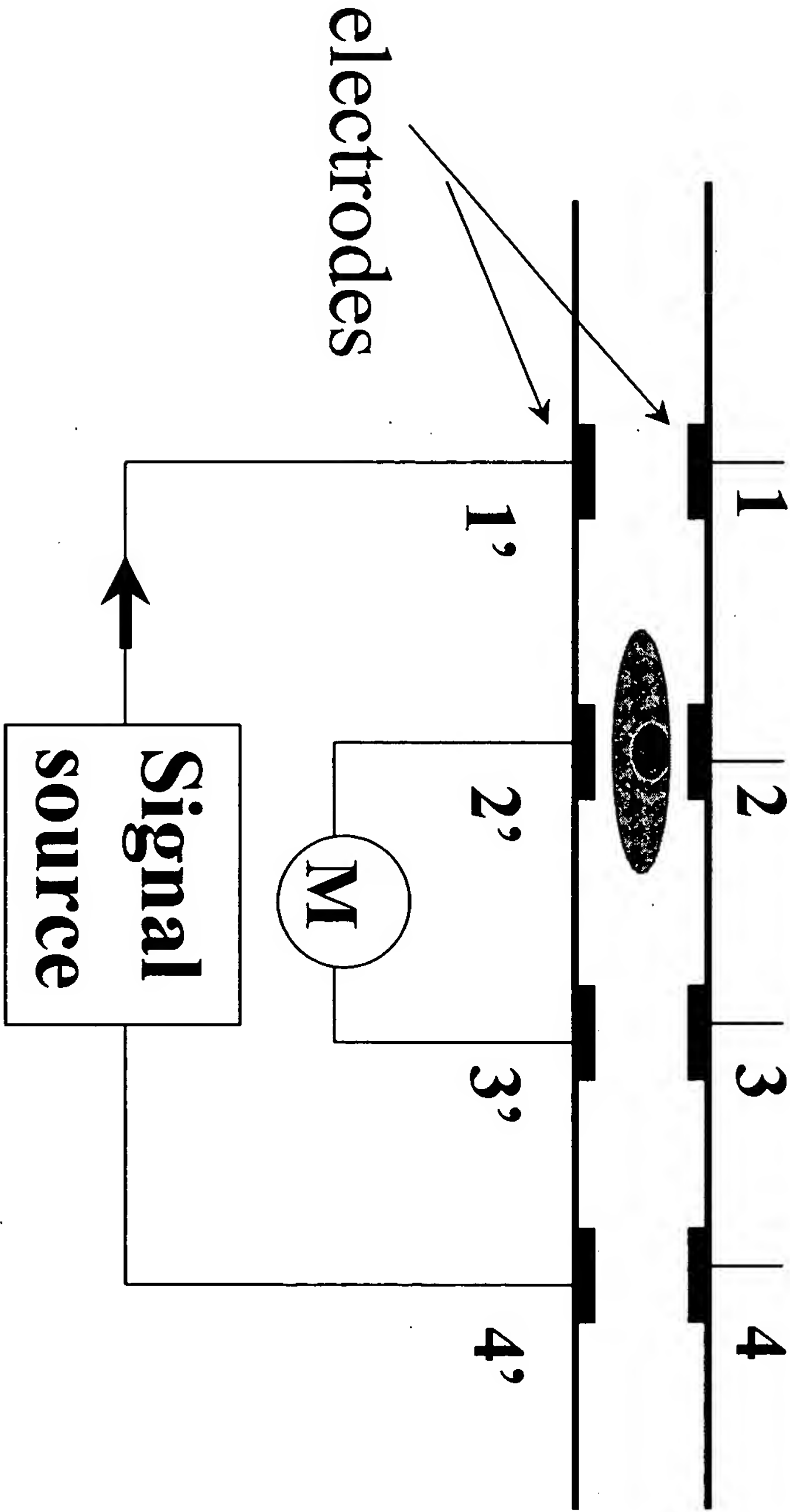


Figure 45

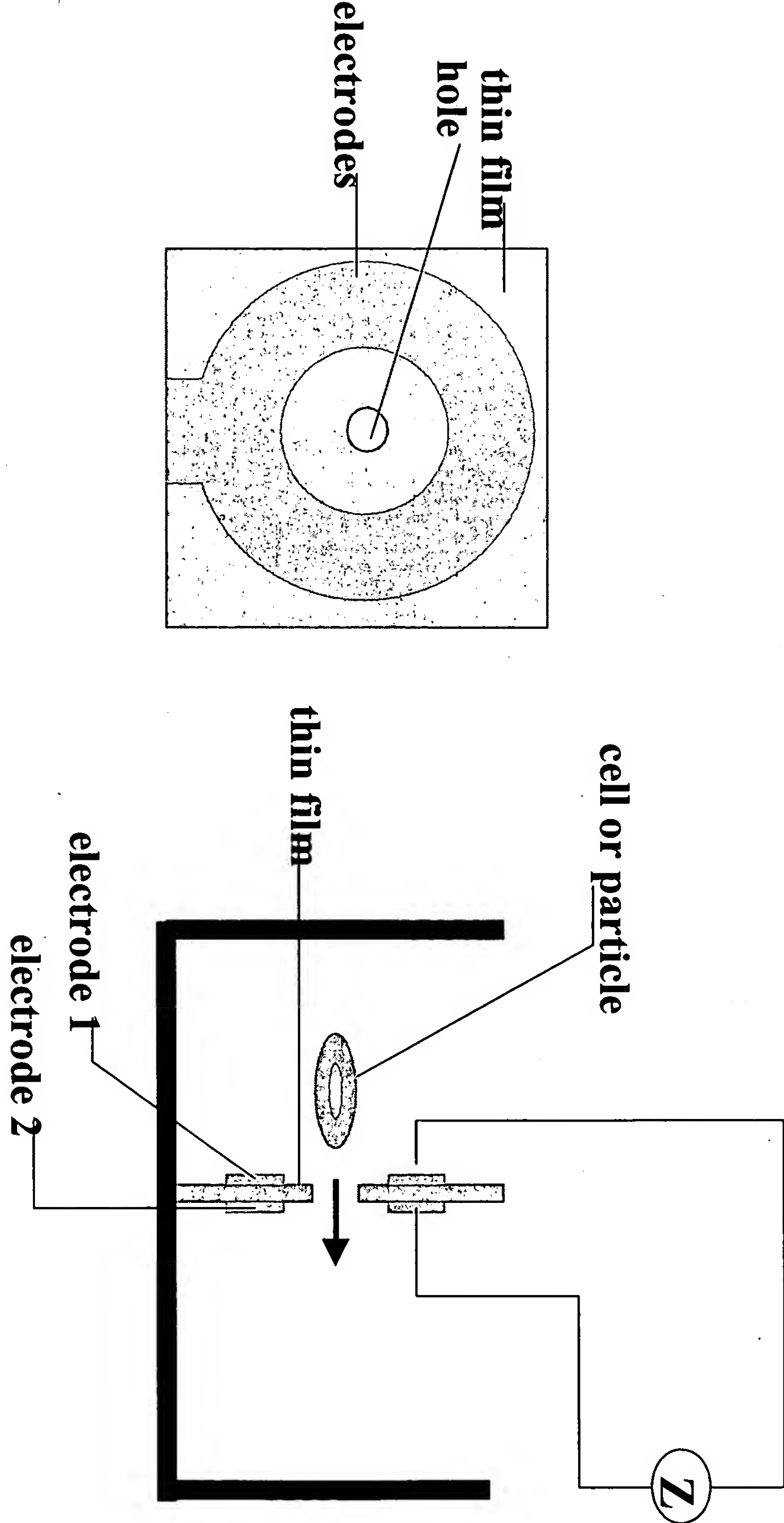


Figure 46

